HISTORY INFORMATION FOR THE FOLLOWING MANUAL:

SERVICE MANUAL — RA-6 CHASSIS

MODEL NAME	REMOTE COMMANDER	DESTINATION	CHASSIS NO.
KP-46WT500	*RM-Y909*	*US/CND*	*SCC-P65LA*

ORIGINAL MANUAL ISSUE DATE: 7/2002

ALL REVISIONS AND UPDATES TO THE ORIGINAL MANUAL ARE APPENDED TO THE END OF THE PDF FILE.

REVISION DATE	REVISION TYPE	SUBJECT
7/2002	No revisions or updates are applicable at this time.	
10/2002	Correction-1	Added Locator Lists to D and A PWB's.
1/2003	Supplement-1	New CRT's introduced. Affects S/N's 9,700,001 and up.
4/2003	Supplement-2	Additional information added to Supplement-1. D and C Board P/N's added.
11/2003	Correction-2	Updated data relating to CR, CG and CB Boards. Affects Pages 55-57 (Schematics), 87 (Exploded View), 89-92 (Parts List).
10/2004	Removed Note from section 2-12-1. Setup For Adjustment. Note is intended for use by the factory during production, and should not be performed by service technicians.Replaced Page 38 with Page 38	

COLOR REAR VIDEO PROJECTOR

SONY®

9-965-935-06

Self Diagnosis Supported model

SERVICE MANUAL

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KP46WT500

RM-Y909

COLOR REAR VIDEO PROJECTOR

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SPECIFICATIONS

Power Requirements 120V AC, 60Hz

Power Consumption (W)
In Use (Max) 230W
In Standby Under 1 W

Inputs/Outputs DVI-HDTV
1 terminal, 3.3V T.M.D.S., 50 ohms
The DVI-HDTV input terminal is compliant with the EIA-861 standard and is not intended for use with personal computers.

Video (IN)
4 total (1 on front panel)
1Vp-p, 75 ohms unbalanced, sync negative

S Video (IN)
3 total (1 on front panel)
Y: 1Vp-p, 75 ohms unbalanced, sync negative
C: 0.286Vp-p (Burst signal), 75 ohms

Audio (IN)
6 total (1 on front panel)
500 mVrms (100% modulation)
Impedance:47 kilo ohms

Audio (VAR/RIX)
1 total
500 mVrms at the maximum volume setting (Variable)
500 mVrms (Fixed)
Impedance (Output):1 kilo ohm

TV Out
1 total
Video: 1 Vp-p 75 ohms unbalanced, Sync negative
Audio: 500 m Vrms (100% modulation)
Impedance (output): 1 kilo ohms

Control S (IN/OUT)
1 total
Minijacks

Component Video Input
2 (Y, P_B, P_R)
Y: 1.0 Vp-p, 75 ohms unbalanced, sync negative
P_B: 0.7 Vp-p, 75 ohms;
P_R: 0.7 Vp-p, 75 ohms

RF Inputs
2 total

Converter
1 total

	KP-46WT500
Speaker Output (W)	20W x 2
Dimensions (W x H x D)	
mm	1086 x 1017 x 609 mm
in	$42^{3/4}$ x 40 x 24 in
Mass kg	61.3 kg
lbs	135 lbs

Projection System
3 picture tubes, 3 lenses, horizontal in-line system

Picture Tube
7-inch high-brightness monochrome tubes (6.3 raster size), with optical coupling and liquid cooling system.

Projection Lenses
High performance, large diameter hybrid lens F1.1

Antenna
75 ohm external terminal for VHF/UHF

Television System
NTSC, American TV Standard

Channel Coverage
VHF: 2-13/ UHF: 14-69/ CATV: 1-125

Screen Size (measured diagonally)
46 inches (KP-46WT500)

Supplied Accessories
Remote Control RM-Y909
Batteries (2) size AA (R6)

Optional Accessories
A/V Cable (VMC-810/820/830 HG)
Audio Cable (RKC-515HG)
Component Video Cable (VMC-10/30 HG)
Control S Cable (RK-G69HG)
AV Receiver (STR-V555ES or equivalent)
TV Stand SU-46WT5

Design and specifications are subject to change without notice.

WARNINGS AND CAUTIONS

CAUTION

Short circuit the anode of the picture tube and the anode cap to the metal chassis, CRT shield, or carbon painted on the CRT, after removing the anode.

WARNING!!

An isolation transformer should be used during any service to avoid possible shock hazard, because of live chassis. The chassis of this receiver is directly connected to the ac power line.

⚠ SAFETY-RELATED COMPONENT WARNING!!

Components identified by shading and ⚠ mark on the schematic diagrams, exploded views, and in the parts list are critical for safe operation. Replace these components with Sony parts whose part numbers appear as shown in this manual or in supplements published by Sony. Circuit adjustments that are critical for safe operation are identified in this manual. Follow these procedures whenever critical components are replaced or improper operation is suspected.

ATTENTION!!

Apres avoir deconnecte le cap de l'anode, court-circuiter l'anode du tube cathodique et celui de l'anode du cap au chassis metallique de l'appareil, ou la couche de carbone peinte sur le tube cathodique ou au blindage du tube cathodique.

Afin d'eviter tout risque d'electrocution provenant d'un châssis sous tension, un transformateur d'isolement doit etre utilisé lors de tout dépannage. Le châssis de ce récepteur est directement raccordé à l'alimentation du secteur.

⚠ ATTENTION AUX COMPOSANTS RELATIFS A LA SECURITE!!

Les composants identifies par une trame et par une marque ⚠ sur les schemas de principe, les vues explosees et les listes de pieces sont d'une importance critique pour la securite du fonctionnement. Ne les remplacer que par des composants Sony dont le numero de piece est indique dans le present manuel ou dans des supplements publies par Sony. Les reglages de circuit dont l'importance est critique pour la securite du fonctionnement sont identifies dans le present manuel. Suivre ces procedures lors de chaque remplacement de composants critiques, ou lorsqu'un mauvais fonctionnement suspecte.

SAFETY CHECK-OUT

After correcting the original service problem, perform the following safety checks before releasing the set to the customer:

1. Check the area of your repair for unsoldered or poorly soldered connections. Check the entire board surface for solder splashes and bridges.

2. Check the interboard wiring to ensure that no wires are “pinched” or touching high-wattage resistors.

3. Check that all control knobs, shields, covers, ground straps, and mounting hardware have been replaced. Be absolutely certain that you have replaced all the insulators.

4. Look for unauthorized replacement parts, particularly transistors, that were installed during a previous repair. Point them out to the customer and recommend their replacement.

5. Look for parts which, though functioning, show obvious signs of deterioration. Point them out to the customer and recommend their replacement.

6. Check the line cords for cracks and abrasion. Recommend the replacement of any such line cord to the customer.

7. Check the B+ and HV to see if they are specified values. Make sure your instruments are accurate; be suspicious of your HV meter if sets always have low HV.

8. Check the antenna terminals, metal trim, “metallized” knobs, screws, and all other exposed metal parts for AC leakage. Check leakage as described below.

Leakage Test

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5 mA (500 microamperes). Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers’ instructions to use these instructions.

2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.

3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The “limit” indication is 0.75 V, so analog meters must have an accurate low voltage scale. The Simpson’s 250 and Sanwa SH-63TRD are examples of passive VOMs that are suitable. Nearly all battery-operated digital multimeters that have a 2 VAC range are suitable (see Figure A).

How to Find a Good Earth Ground

A cold-water pipe is a guaranteed earth ground; the cover-plate retaining screw on most AC outlet boxes is also at earth ground. If the retaining screw is to be used as your earth ground, verify that it is at ground by measuring the resistance between it and a cold-water pipe with an ohmmeter. The reading should be zero ohms.

If a cold-water pipe is not accessible, connect a 60- to 100-watt trouble-light (not a neon lamp) between the hot side of the receptacle and the retaining screw. Try both slots, if necessary, to locate the hot side on the line; the lamp should light at normal brilliance if the screw is at ground potential (see Figure B).

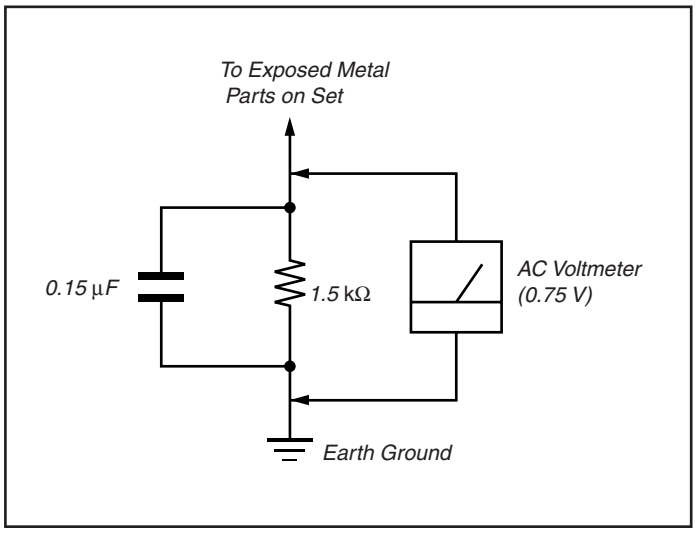


Figure A. Using an AC voltmeter to check AC leakage.

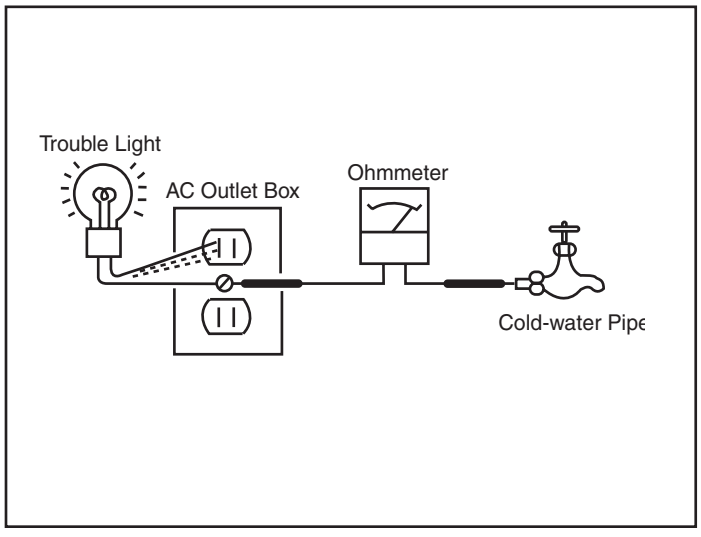


Figure B. Checking for earth ground.

SELF-DIAGNOSTIC FUNCTION

Self Diagnosis Supported model

The units in this manual contain a self-diagnostic function. If an error occurs, the STANDBY/TIMER LED will automatically begin to flash. The number of times the LED flashes translates to a probable source of the problem. A definition of the STANDBY/TIMER LED flash indicators is listed in the instruction manual for the user's knowledge and reference. If an error symptom cannot be reproduced, the Remote Commander can be used to review the failure occurrence data stored in memory to reveal past problems and how often these problems occur.

Diagnostic Test Indicators

When an error occurs, the STANDBY/TIMER LED will flash a set number of times to indicate the possible cause of the problem. If there is more than one error, the LED will identify the first of the problem areas.

Results for all of the following diagnostic items are displayed on screen. If the screen displays a "0", no error has occurred.

Diagnostic Item	No. of times STAND BY / TIMER lamp flashes	Probable Cause Location	Detected Symptoms
Power does not turn on	Does not light	• Power cord is not plugged in. • Fuse is burned out (F6001). (G Board)	• Power does not come on. • No power is supplied to the TV. • AC Power supply is faulty.
+B overcurrent (OCP)*	2 times	• H.OUT (Q8024) is shorted. (D Board) • +B PWM (Q8035, Q8038) is shorted. (D Board)	• Power does not come on. • Load on power line shorted.
+B overvoltage (OVP)	3 times	• IC501 is faulty. (G Board) • IC5002 is faulty. (G Board)	• Has entered standby mode.
Vertical deflection stopped	4 times	• ±15V is not supplied. (D Board) • IC8003 is faulty. (A Board)	• Has entered standby state after horizontal raster. • Vertical deflection pulse is stopped. • Power line is shorted, or power supply is stopped.
White Balance Failure (Not Balanced)	5 times	• Video OUT (IC7101, IC7201, IC7301) is faulty. (CR, CG, CB Boards) • CRT drive (IC309) is faulty. (A Board) • Screen (G2) is improperly adjusted. **	• No raster is generated. • CRT Cathode current detection reference pulse output is small.
Low B OCP/OVP (Overcurrent/Overvoltage) ***	6 times	• +5 line is overloaded. (A, B Boards) • +5 line is shorted. (A, B Boards)	• No picture
Horizontal deflection stopped	7 times	• Q8035, Q8038 is shorted. (D Board)	
High-voltage error	8 times	• T8005 is faulty. (D Board)	
Audio error	9 times	• ± 19V line is shorted. (A, B Boards) • IC708 is faulty. (A Board) • PS701 or PS702 is opened. (A Board)	• No sound

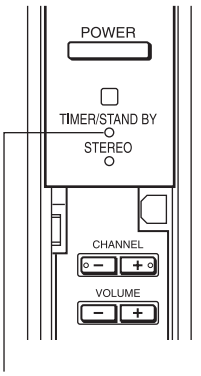
* If a +B overcurrent is detected, stoppage of the vertical deflection is detected simultaneously. The symptom that is diagnosed first by the microcontroller is displayed on the screen.

** Refer to Screen (G2) Adjustments in Section 2-2 of this manual

*** If TIMER or STAND BY indicator blinks six (6) times, unplug the unit and wait 10 minutes before performing the adjustment.

Display of Standby/Timer LED Flash Count

< FRONT PANEL >



TIMER/STAND BY indicator

* One blink is not used for self-diagnosis.

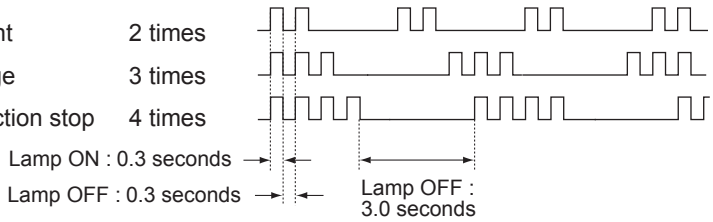
• EXAMPLE

<Diagnosis Items> <Number of Blinks>

• +B overcurrent 2 times

• +B overvoltage 3 times

• Vertical deflection stop 4 times



Release of TIMER STAND BY indicator blinking

The TIMER/STANDBY indicator blinking display is released by turning OFF the power switch on the TV main unit or removing the plug from the power.

Self-Diagnosis Screen Displays

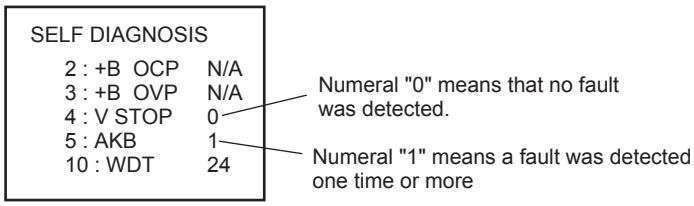
In cases of malfunctions where it is not possible to determine the symptom such as when the power goes off occasionally or when the screen disappears occasionally, there is a screen display on whether the malfunction occurred or not in the past (and whether the detection circuit operated or not) in order to allow confirmation.

Screen Display Method

Quickly press the remote command button in the following order from the standby state.

Display ⟶ Channel 5 ⟶ Sound Volume* − ⟶ Power ON

*Note that this differs from entering the service mode (sound volume +)


SELF DIAGNOSIS
2 : +B OCP N/A
3 : +B OVP N/A
4 : V STOP 0
5 : AKB 1
10 : WDT 24
Numeral "0" means that no fault was detected.
Numeral "1" means a fault was detected one time or more

Self-Diagnosis Screen Display

The results display is not automatically cleared. In case of repairs and after repairs, check the self-diagnosis screen and be sure to return the results display to " 0 ".

If the results display is not returned to " 0 " it will not be possible to judge a new malfunction after completing repairs.

Method of Clearing Results Display

1. Power off (Set to the standby mode.)
2. Display ⟶ Channel 5 ⟶ Sound Volume + ⟶ Power ON (Service Mode)
3. Channel 8 ⟶ ENTER (Test reset = Factory preset condition)

Method of Ending Self Diagnosis Screen

When ending the self-diagnosis screen completely, turn the power switch OFF on the remote commander or the main unit.

Self-Diagnosis Function Operation

OCP Low B and +B line detect DET SHORT, and shut-down POWER ON RELAY.
Reset by turning power on/off. In case of +B is loaded approx. 1.5A or more, microcomputer detects it via IC5005.

OVP In case of +B becomes approx. 150V or more, POWER ON RELAY shuts down and microcomputer detects it via IC5005.
Reset by turning power on/off just the same as OCP.

Low B Occurs when set +5V is out

V Stop In the case of the V Drive disappearing, Q8001 detects it and shuts-down the POWER ON RELAY. The microcomputer detects it and causes the LED to blink.

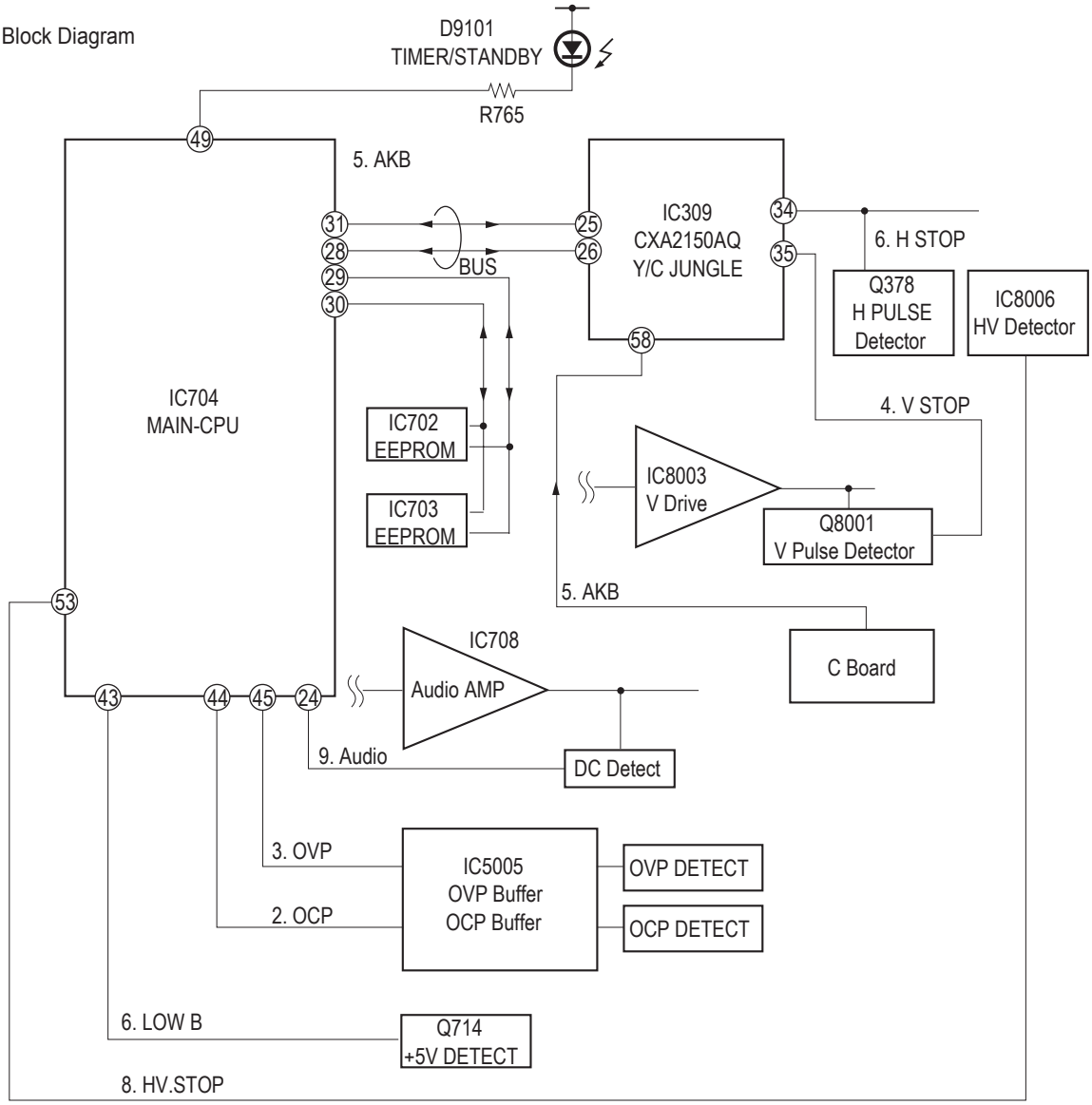
AKB IK detection. Makes LED blink when microcomputer doesn't detect IK, returns of IC309 (CXA2150AQ) 20 seconds or more.

H Stop In case H DRIVE disappears, Q378 detects it and shuts-down POWER ON RELAY.
Microcomputer receives H Stop data from Q378 and makes the LED blink.

HV Stop In case HV becomes 33kV or more, IC8006 detects it and shuts-down POWER ON RELAY.
The microcomputer makes the LED blink.

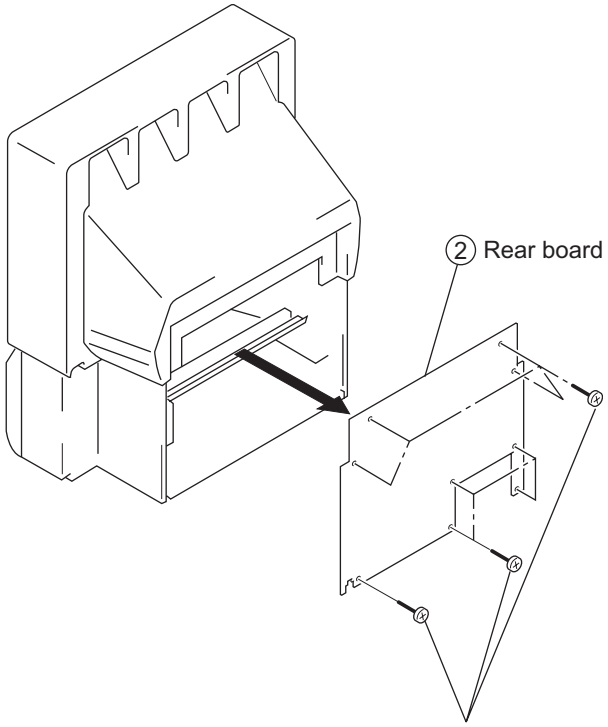
Audio In case of DC component overlaps the output of Audio Amp., the microcomputer detects it and shuts-down POWER ON RELAY.
The microcomputer makes the LED blink.

Self-Diagnosis Block Diagram

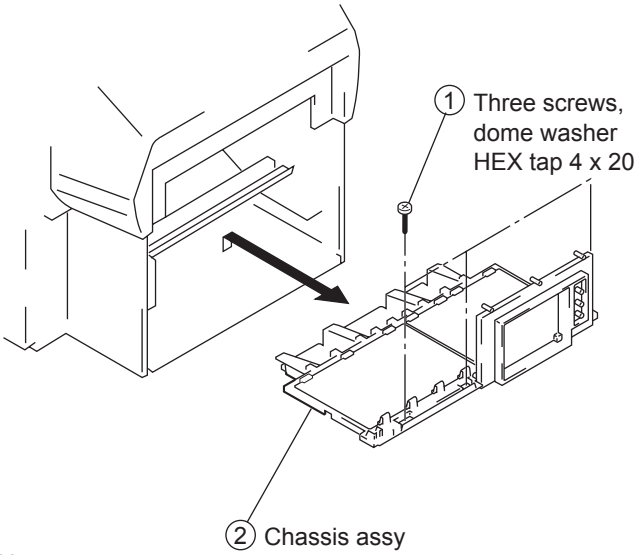


SECTION 1: DISASSEMBLY

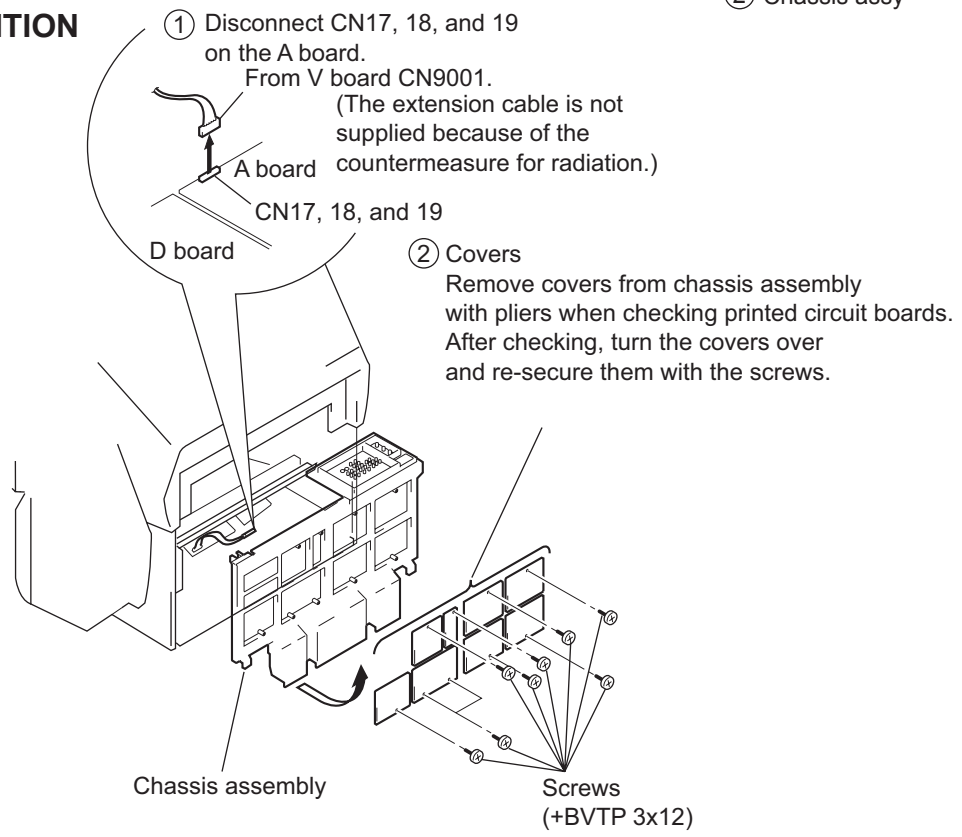
1-1. REAR BOARD REMOVAL



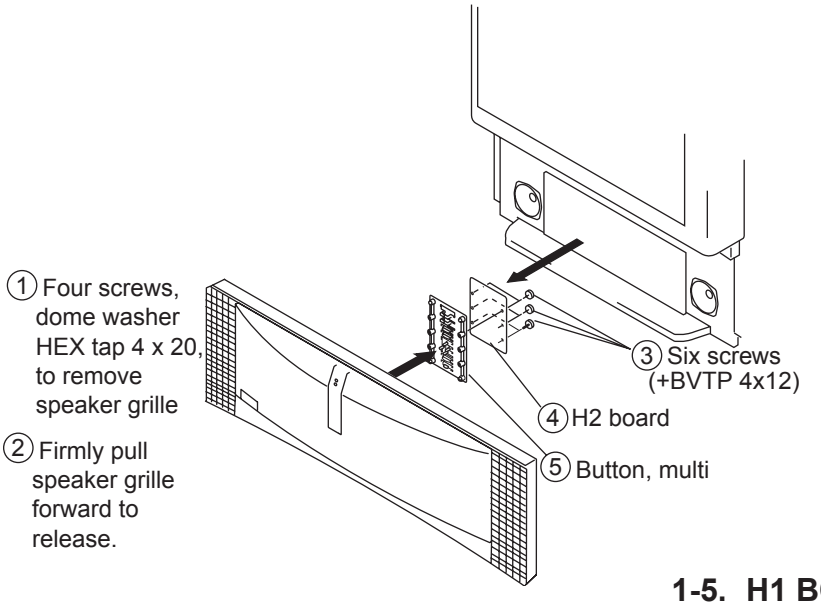
1-2. CHASSIS ASSEMBLY REMOVAL



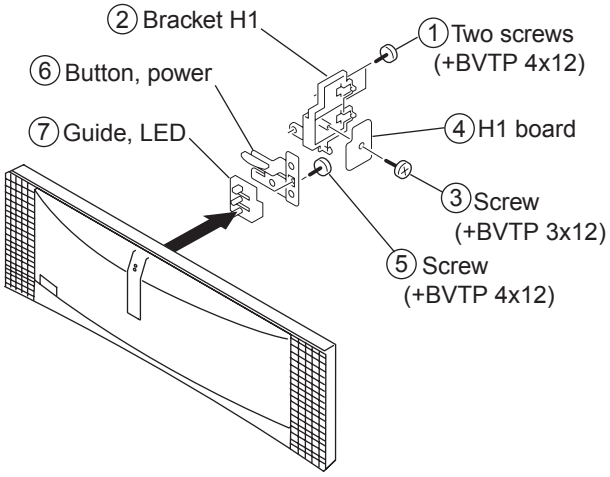
1-3. SERVICE POSITION



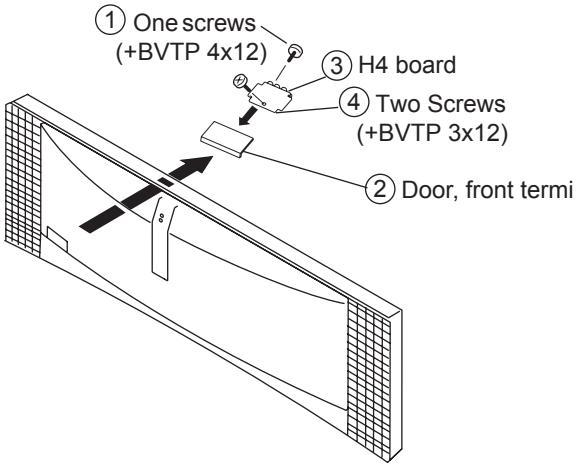
1-4. SPEAKER GRILLE AND H2 BOARD REMOVAL


① Four screws, dome washer HEX tap 4 x 20, to remove speaker grille
② Firmly pull speaker grille forward to release.
③ Six screws (+BVTP 4x12)
④ H2 board
⑤ Button, multi

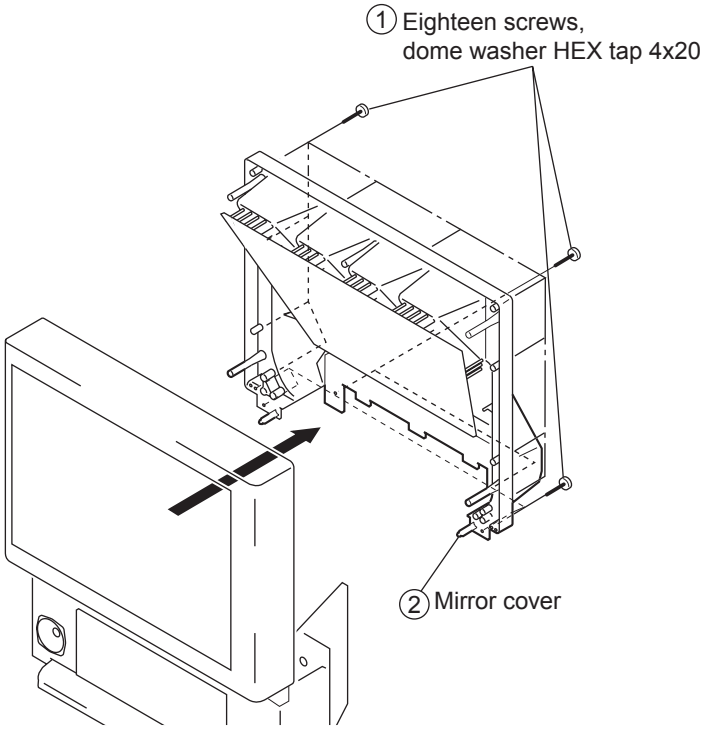
1-5. H1 BOARD REMOVAL



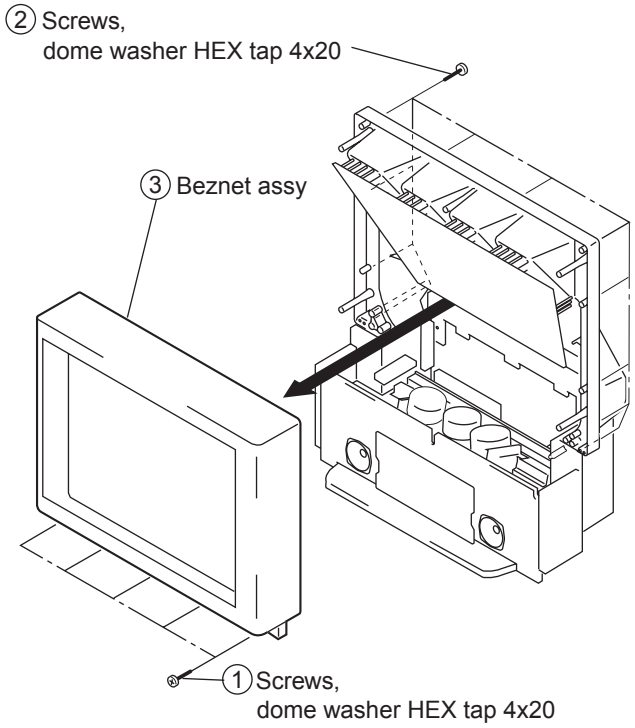
1-6. H4 BOARD REMOVAL



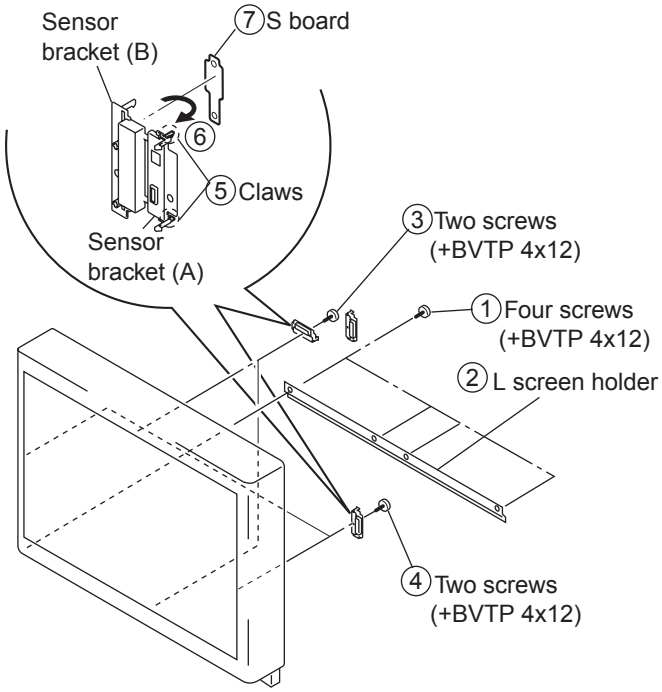
1-7. MIRROR COVER REMOVAL



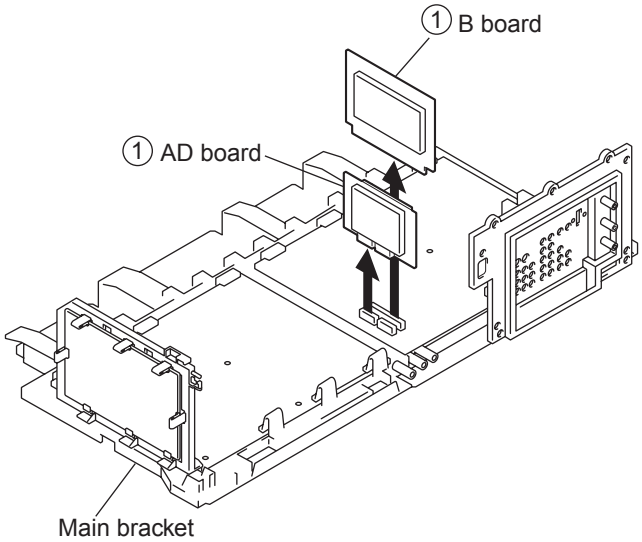
1-8. BEZNET ASSEMBLY REMOVAL



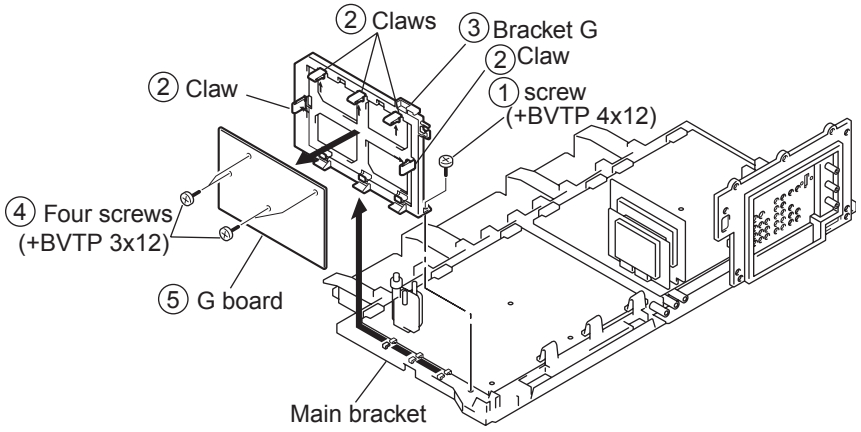
1-9. S BOARD REMOVAL



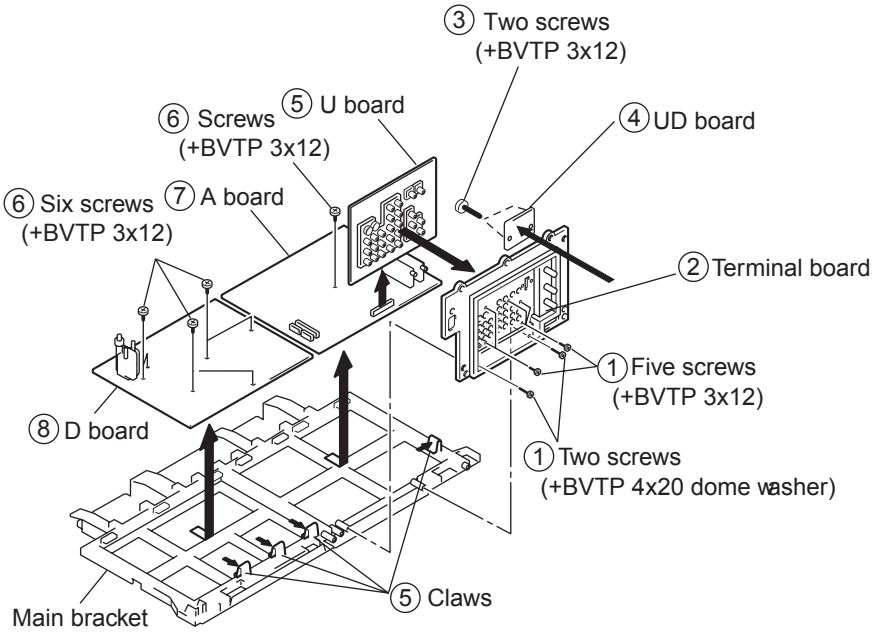
1-10. AD BOARD AND B BOARD REMOVAL



1-11. G BOARD REMOVAL

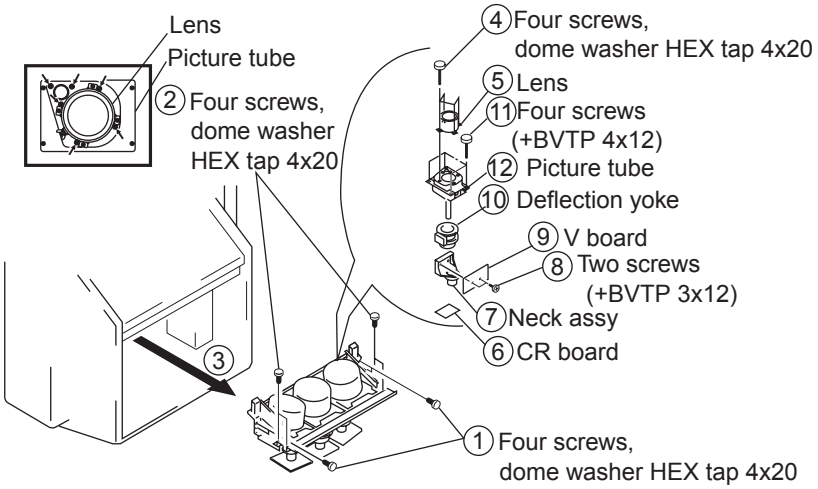


1-12. TERMINAL BOARD, A BOARD, D BOARD, U BOARD, AND UD BOARD REMOVAL

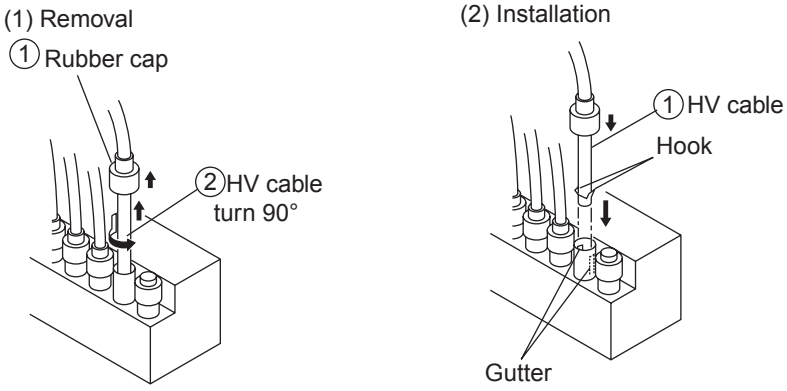


1-13. PICTURE TUBE REMOVAL

CAUTION Removing the arrow-marked screws is strictly prohibited.
If removed, it may cause liquid spill.



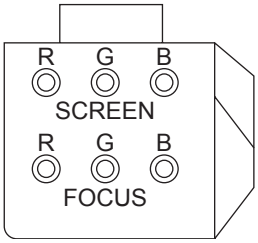
1-14. HIGH-VOLTAGE CABLE INSTALLATION AND REMOVAL



SECTION 2: SET-UP ADJUSTMENTS

2-1. SCREEN VOLTAGE ADJUSTMENT (COARSE ADJUSTMENT)

1. Receive the Monoscope signal..
2. Set BRIGHTNESS to 50% and PICTURE to minimum.
3. Turn the red VR on the focus block all the way to the left and then gradually turn it to the right until the retrace line is barely visible.
4. Gradually turn the control to the left until the retrace line disappears.

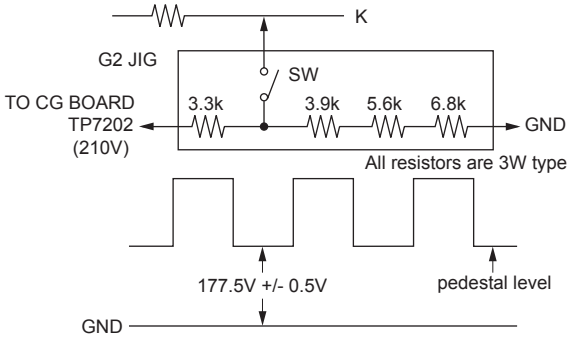


FOCUS Block

2-2. SCREEN (G2) ADJUSTMENT (FINE ADJUSTMENT)

If the jig described below is available, it is recommended that the G2 Fine Mode Adjustment be performed to set the screen controls to their optimal condition. If desired, you can build the jig illustrated below, using 3-watt resistors. Please note that if the proper voltage is not obtained with the listed resistor's values, then increase or decrease one of the values in the resistor network to obtain the correct voltage.

1. Select VIDEO-1 mode no signal applied (the screen must be black).
2. Connect the G2 JIG.
3. SW on JIG.
4. Connect an oscilloscope to the TP7101(KR), TP7202(KG) and TP7301(KB) of CR board, CG board, and CB board.
5. Adjust red, green, and blue screen voltage to 177.5+/-0.5V with screen VR on the focus block.



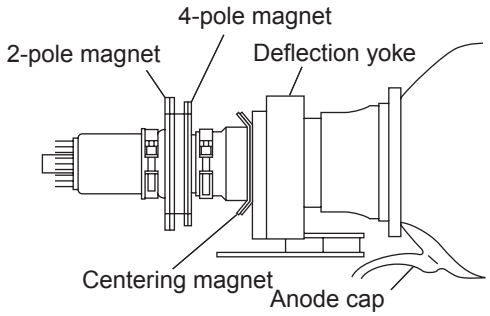
2-3. DEFLECTION YOKE TILT ADJUSTMENT

1. Connect the color bar generator monoscope pattern to Video 1 input.
2. Cover the red and blue CRT lenses with lens caps to allow only green to show (or use the method shown in the note below for turning off the CRTs individually without using lens caps).
3. Loosen the CRT's deflection yoke set screw and align the tilt of the deflection yoke so that the horizontal bars at the center of the monoscope pattern are horizontal.
4. After aligning the deflection yoke fasten it securely to the funnel-shaped portion (neck) of the CRT.

   The tilt of the deflection yoke is aligned in the mode.
5. Cover the green and blue CRT lenses with lens caps to allow only green to show (or use the method shown in the note below for turning off the CRTs individually without using lens caps), then repeat steps 3 and 4 for the red CRT.

   Cover the green and red CRT lenses with lens caps to allow only green to show (or use the method shown in the note below for turning off the CRTs individually without using lens caps), then repeat steps 3 and 4 for the blue CRT.

Note: If lens caps are unavailable, you can cut off the unnecessary color beams by controlling the service mode 2150P-2 1 RGBS.

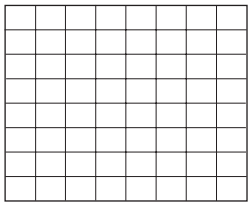


2-4. FOCUS LENS ADJUSTMENT

In this adjustment, use the remote commander while in service mode. For details on the usage of the service mode and the remote commander, please refer to section
2-10. ELECTRICAL ADJUSTMENTS BY REMOTE COMMANDER.

1. Loosen the lens screw.
2. Cover the red and blue CRT lenses with lens caps to allow only green to show (or use the method shown in the note below for turning off the CRTs individually without using lens caps).
3. Turn the green lens to adjust to the optimum focus point with the crosshatch signal.
4. Tighten the lens screw.
5. Cover the green and blue CRT lenses with the lens caps to allow only red to show (or use the method shown in the note below for turning off the CRTs individually without using lens caps).
6. Turn the red lens to adjust to the optimum focus point with the crosshatch signal.
7. Tighten the lens screw.
8. Cover the green and red CRT lenses with the lens caps to allow only blue to show (or use the method shown in the note below for turning off the CRTs individually without using lens caps).
9. Turn the blue lens to adjust to the optimum focus point with the crosshatch signal.
10. Tighten the lens screw.
11. After adjusting the items:
    2-5. FOCUS VR ADJUSTMENT,
    2-6. 2-POLE MAGNET ADJUSTMENT,
    2-8. 4-POLE MAGNET ADJUSTMENT,
    reconfirm the optimum focus point and adjust again if necessary.

* Every time 6 is pressed, the test signal changes to:
  "crosshatch+video signal" → "crosshatch+borderline(black)" → "crosshatch(black)" → "dots(black)" → off



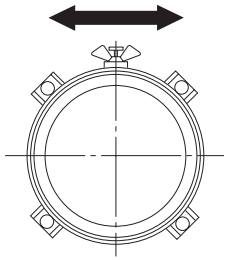
Test Signal

Note: If lens caps are unavailable, you can cut off the unnecessary color beams by controlling the service mode 2150P-2 1 RGBS.

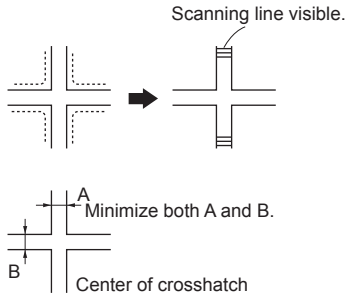
2-5. FOCUS VR ADJUSTMENT

1. Set generator to crosshatch.
2. Cover the red and blue CRT lenses with lens caps to allow only green to show (or use the method shown in the note below for turning off the CRTs individually without using lens caps).
3. Turn the green focus VR on the focus block to adjust to the optimum focus point with the crosshatch signal.
4. Cover the green and blue picture lenses with lens caps to allow only red to show (or use the method shown in the note below for turning off the CRTs individually without using lens caps).
5. Turn the red focus VR on the focus block to adjust to the optimum focus point with the crosshatch signal.
6. Cover the green and red picture lenses with lens caps to allow only blue to show (or use the method shown in the note below for turning off the CRTs individually without using lens caps).
7. Turn the blue focus VR on the focus block to adjust to the optimum focus point with the crosshatch signal.
8. After adjusting the items:
   2-4. FOCUS LENS ADJUSTMENT,
   2-6. 2-POLE MAGNET ADJUSTMENT,
   2-8. 4-POLE MAGNET ADJUSTMENT,
   reconfirm the optimum focus point and adjust again if necessary.

Note: If lens caps are unavailable, you can cut off the unnecessary color beams by controlling the service mode 2150P-2 1 RGBS.

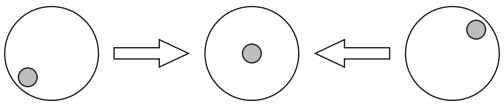


Lens



2-6. 2-POLE MAGNET AND CENTERING MAGNET ADJUSTMENT

1. Set the picture mode to PRO and picture to MAX.
2. Either select the PJED Test Pattern dot hatch signal or apply an external dot signal.
3. Cover the red and blue CRT lenses with lens caps to allow only green to show (or use the method shown in the note below for turning off the CRTs individually without using lens caps).
4. Turn the focus VR on the focus block to the left (counter clockwise) and set it to overfocus to enlarge the spot.
5. Adjust the CRT's 2-pole magnet so that the small bright spot is in the center.
6. Align the focus VR on the focus block and set it for the best focus.
7. Apply a Monoscope signal to the set.
8. Adjust the H-CENTERING and V-CENTERING roughly by the centering magnets.
9. Check 2-pole magnet adjustment. If necessary repeat steps 1-6.
10. Repeat steps 1 through 9 for the red CRT covering the green and blue CRT lenses with lens caps to allow only red to show (or use the method shown in the note below for turning off the CRTs individually without using lens caps) and adjust the red focus control on the focus block.
11. Repeat steps 1 through 9 for the blue CRT covering the red and green CRT lenses with lens caps to allow only blue to show (or use the method shown in the note below for turning off the CRTs individually without using lens caps) and adjust the blue focus control on the focus block.



Note: If lens caps are unavailable, you can cut off the unnecessary color beams by controlling the service mode 2150P-2 1 RGBS.

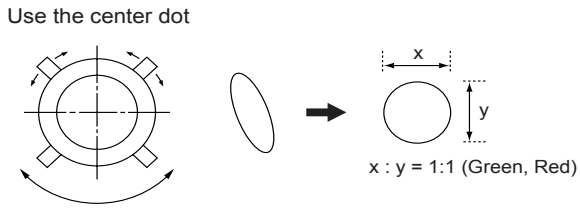
2-7. CENTERING MAGNET ADJUSTMENT

Not required - Combined with 2-6 2-Pole And Centering Magnet Adjustment.

2-8. 4-POLE MAGNET ADJUSTMENT

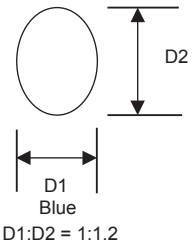
1. Set the picture mode to PRO and picture to MAX.
2. Receive the Dot signal.
3. Cover the red and blue CRT lenses with lens caps to allow only green to show (or use the method shown in the note below for turning off the CRTs individually without using lens caps).
4. Turn the (green) focus VR on the focus block to the right (clockwise) and set it to under-focus to reduce the spot.
5. Adjust the 4-pole magnet so that the small spot in the center of the screen becomes round for green and red.
6. Adjust the blue spot to an oval shape X:Y=1:1.2

Note: If lens caps are unavailable, you can cut off the unnecessary color beams by controlling the service mode 2150P-2 1 RGBS.



2-9. BLUE DEFOCUS ADJUSTMENT

1. Setup: Apply a Dot Hatch Signal and set the mode to Pro Mode. Change the color temperature to Cool in the user's menu.
2. Cover the red and green CRT lenses with lens caps to allow only blue to show (or use the method shown in the note below for turning off the CRTs individually without using lens caps).
4. Turn the blue focus VR on the focus block to the right (clockwise) to make the round dot oval.



5. Check the flare with a high luminance signal to make sure the flare is minimal while the bright spot is located in the center, If not, readjust the 2 and 4-pole magnets.
6. Check for uniformity on a 100% IRE to an all white signal.

Note: If lens caps are unavailable, you can cut off the unnecessary color beams by controlling the service mode 2150P-2 1 RGBS.

2-10. ELECTRICAL ADJUSTMENTS BY REMOTE COMMANDER

All of the circuit adjustments can be made by using the remote commander (RM-Y909).

NOTE : The following test equipment is required:

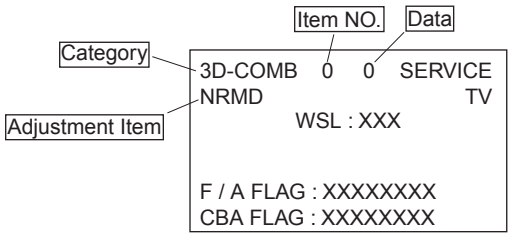
1. Pattern Generator (with component outputs)
2. Frequency counter
3. Digital multimeter
4. Audio oscillator

2-10-1. METHOD OF ENTERING THE SERVICE ADJUSTMENT MODE

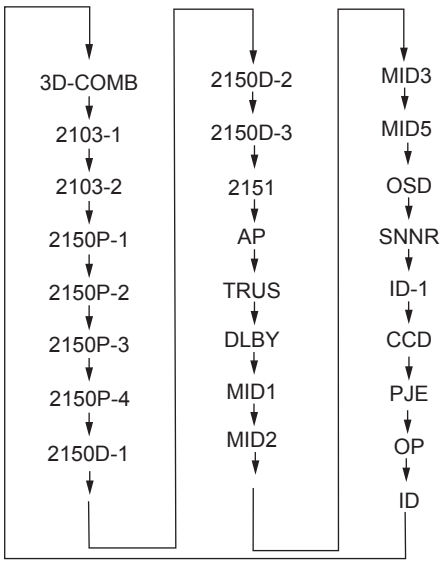
SERVICE MODE PROCEDURE

1. TV must be in Standby mode. (Power off)
2. Press “DISPLAY”, “5”, “VOL +”, then “POWER” on the remote commander.
   (Press each button within 1 second of pressing the previous button.)

SERVICE MODE ADJUSTMENT



3. The screen displays the item being adjusted within that category.
4. Press 1 or 4 on the remote commander to select the adjustment item.
5. Press 3 or 6 on the remote commander to change the data.
6. Press 2 or 5 on the remote commander to select the adjustment category.
   Every time you press 2 (Category up), service mode changes in the order shown below:



7. If you want to go back to the most recently saved value, press “0” then “ENTER” to read the memory.
8. Press “MUTING” then “ENTER” to write the new adjustment data into memory.
9. When you want to exit the service mode, turn the power off.

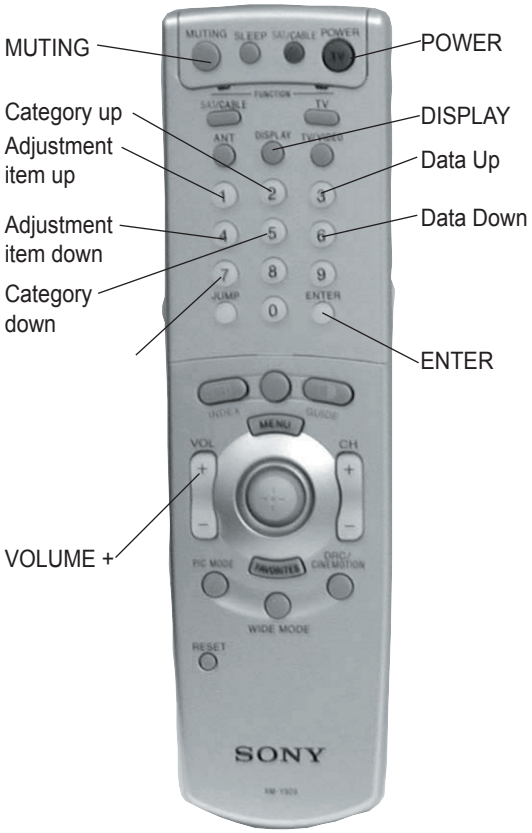
Note: Press “8” then “ENTER” on the remote commander to restore the factory settings for user controls and channel memories (this will also turn set off and then on to exit the service mode).

2-10-2. MEMORY WRITE CONFIRMATION METHOD

1. After adjustment, turn the power off with the remote commander.
2. Turn the power ON and set to service mode.
3. Cycle through the adjusted items again and confirm that the adjustments were saved.

2-10-3. ADJUSTING BUTTONS AND INDICATROR

Note: When the PJE mode (which displays an internally generated signal) is activated, several buttons on the remote commander will have different functions than the ones listed below. Therefore, when in the PJE mode, refer to section 2-12-3 for button functions.



RM-Y909

2-11. SERVICE DATA LISTS

11. APPENDIX

3D-COMB uPD64082

Reg.No	&Name	FUNCTION					
			RF/Video1-4		Svideo		
			Standard	Non-standard	Standard	Non-standard	
0	NRMD	Operation mode setting	0	1	3	3	
1	YAPS	Y-output correction	3				
2	CLKS	System clock setting	1				
			RF/Video1-4		Svideo		
			Standard	Non-standard	Standard	Non-standard	
3	NSDS	Selection for standard/non-standard signal processing	0	0	0	0	
4	MSS	Selection for inter-frame/inter-line processing	0				
5	KILS	Killer processing selection	1				
			RF	Video1-4			
6	CDL	C-signal phase with respect to the Y-signal	3	3			
			NRMD=0	NRMD=1	NRMD=2	NRMD=3	
7	DYCO	DY detection coring level	2	2	2	2	
8	DYGA	DY detection gain	10	10	10	10	
9	DCCO	DC detection coring level	5	5	5	5	
10	DCGA	DC detection gain	5	5	5	5	
11	YNRL	Frame recursive YNR nonlinear filter limit level	1 (				
12	CNRL	Frame recursive CNR nonlinear filter limit level	1				
			RF	Video1-4	Video5,6,7		
13	VTRH	Hysteresis for Hsysnc non-standard signal detection	1	1	1		
14	VTRR	Sensitivity for Hsysnc non-standard signal detection	1	1	1		
15	LDSR	Sensitivity for frame non-standard signal detection	2	2	2		
			VM=off	VM=Low	VM=Mid	VM=High	
16	VAPG	V-aperture compensation gain	0	0	0	0	
17	VAPI	V-aperture compensation convergence point	0	0	0	0	
				SNNR=0	SNNR=1	SNNR=2	SNNR=3
18	YPET	Y peaking filter center frequency	3	0	0	0	0
19	YPFG	Y peaking filter gain	8	0	1	2	3
			SNNR=0	SNNR=1	SNNR=2	SNNR=3	
20	YHCO	Y output high frequency component coring	0	1	1	1	Note: YHCO & YHCG are defined directly by SNNR data.
21	YHCG	Y output high frequency component coring gain	1	1	1	1	
22	HSSL	Hsync slice level	12				
23	VSSL	Vsync slice level	8				
24	ADCL	ADC clock delay	3				
			NRMD=0	NRMD=1	NRMD=2	NRMD=3	
25	D2GA	Moving detection gain	4	4	4	4	
26	KILR	Killer detection reference	3				

3D-COMB uPD64082

Reg.No	&Name	FUNCTION								
27	OP	Option:Selection of comb filter&recursive n.reduction types	1							
			RF	CVideo1	SVideo1	CVideo2	SVideo2	CVideo3	SVideo3	CVideo4
28	NR1	Noise reduction on/off	0	0	1	0	1	0	1	0
29	NR2	SNNR control on/off	0							
30	WSL	Noise level detection level data	0	Read data						
31	HPLL	H-PLL filter	1							
32	BPLL	Burst PLL filter	1							
33	FSCF	Burst extraction gain	0							
34	PLLF	PLL loop gain	1							
			RF	Video1-4	Video5,6,7					
35	CC3N	Selection if a line-comb filter C separation filter characteristic	0	0	0					
36	HDP	Fine adjustment of the system H-phase	5							
37	BGPS	Internal burst gate start position	4							
38	BGPW		10							
39	TEST	Test bit * forbidden setting	0							
40	WSC	Amount of noise detection coring	1							
			RF	Video1-4	Video5,6,7					
41	LIND	DRC-M line-doubling setting for non-standard signals	0	0	2					
42	PFGO	* Not used	3							
			SNNR=0	SNNR=1	SNNR=2	SNNR=3				
#16	VAPG		0	0	0	0				

NTSC-YCT CXA2103-1

Reg.No	&Name	FUNCTION								
			RF/Video1-4 P&P Left -DRC	Video5,6-480i P&P Left -DRC	Video7-480i P&P Left -DRC					
0	YLEV	Y-Out gain	34	40	40					
1	CLEV	Cb&Cr-Out gain	27	46	46					
			RF	Video1-4						
2	SCON	Sub contrast								
3	SCOL	Sub color								
4	SHUE	Sub hue								
5	YDLY	Y/C delay time	0	0						
			RF	Video1-4	Svideo	Video 5,6-480i	Video7-480i	SNNR=0	SNNR=1	SNNR=2	SNNR=3
6	SHAP	Sharpness	5	4	4	4	8	0	1	2	3
7	SHF0	Sharpness f0 selector	3	3	3	3	0				
8	PREO	Sharpness pre/over-shoot ratio	3	0	0	0	3				
9	BPF0	Chroma band filter f0 setting	3	0	0	0	0				
10	BPFO	Chroma band filter O setting	0	3	3	3	3				
11	BPSW	Chroma band filter on/off	1	0	0	0	0				
12	TRAP	Y block chroma trap filter on/off	0	0	0	0	0				
13	LPF	Y Cb Cr-Output LPF on/off	1	1	1	1	1				
			RF	Video1-4	Video5,6	Video7					
14	AFCG	AFC Loop gain	1	0	0	0					
15	CDMD	V countdown system mode selector	3	3	3	3					
16	SSMD	H&Vsync slide level setting	0	0	0	0					
17	HMSK	Masking of macrovision signal on/off	1	1	1	0					
18	HALI	H automatic adjustment on/off	0	0	0	0					
19	PPHA	H TIM phase adjustment video	7	7	7	7					

NTSC-YCT CXA2103-1

			RF/Video1-4 P&P Left -DRC	Video5,6-480i P&P Left -DRC	Video7-480i P&P Left -DRC	
20	CBOF	Cb Offset Adjustment			34	Note: CBOF adjustment does not affect Video 7
21	CROF	Cr Offset Adjustment			32	Note: CROF adjustment does not affect Video 7
22	CBO2	Cb Offset Adjustment	0	0		Note: CB02 adjustment only affects Video 7
23	CRO2	Cr Offset Adjustment	0	0		Note: CR02 adjustment only affects Video 7

				P&P & Favorite				P&P & Favorite			
			Single Picture	UBLK-0	UBLK-1	UBLK-2	UBLK-3	UBLK-4	UBLK-5	UBLK-6	UBLK-7
24	ATPD	Auto-pedestal Inflection Point	0	0	0	2	0	0	2	3	2
25	DCTR	DC Transmission Ratio	0	0	0	1	0	0	2	2	3

NTSC-YCT CXA2103-2

Reg.No &Name FUNCTION

			RF/Video1-4 P&P Right	Video5,6,7-480 P&P Right , DRC	
0	YLEV	Y-Out gain	34	38	Note: Data in the right column is used when main signal is NOT 480i
1	CLEV	Cb&Cr-Out gain	27	31	
			RF	Video1-4	Note: Sub signal goes through DRC, when main signal is 480p, 1080i, or 720p
2	SCON	Sub contrast			
3	SCOL	Sub color			
4	SHUE	Sub hue			
5	YDLY	Y/C delay time	0	0	

			RF	Cvideo	Svideo	SNNR=0	SNNR=1	SNNR=2	SNNR=3
6	SHAP	Sharpness	4	4	4	0	1	2	3
7	SHF0	Sharpness f0 selector	3	3	3				
8	PREO	Sharpness pre/over-shoot ratio	0	0	0				
9	BPF0	Chroma band filter f0 setting	0	0	0				
10	BPFO	Chroma band filter O setting	0	0	0				
11	BPSW	Chroma band filter on/off	0	0	0				
12	TRAP	Y block chroma trap filter on/off	0	0	0				
13	LPF	Y Cb Cr-Output LPF on/off	0	0	0				
			RF	Video1-4					
14	AFCG	AFC Loop gain	1	0	Note: Reg.No 14 to 19 are the same data as CXA2103-1.				
15	CDMD	V countdown system mode selector	3	3					
16	SSMD	H&Vsync slide level setting	0	0					
17	HMSK	Masking of macrovision signal on/off	1	1					
18	HALI	H automatic adjustment on/off	0	0					
19	PPHA	H TIM phase adjustment video	7	7					

			RF/Video1-4 P&P Right	Video5,6,7-480 P&P Right , DRC
20	CBOF	Cb Offset Adjustment		
21	CROF	Cr Offset Adjustment		

				P&P & Favorite				P&P & Favorite			
			Single Picture	UBLK-0	UBLK-1	UBLK-2	UBLK-3	UBLK-4	UBLK-5	UBLK-6	UBLK-7
22	ATPD	Auto-pedestal Inflection Point P&P & Favorite	0	0	0	2	0	0	2	3	2
23	DCTR	DC Transmission Ratio P&P & Favorite	0	0	0	1	0	0	2	2	3

Note: Reg.No 22 and 23 are the same data as CXA2103-1.

CRT Driver CXA2150P-1

Reg.No	&Name	FUNCTION										
			RF	Cvideo	Svideo	Video5,6 480i	Video5,6 480P	Video5,6 1080i	P&P	Video7 vga	Video7 480i	Video7 480p	Video7 1080i
0	SBOT	Offset for SBRT	0	0	0	5	7	7	7	7	0	5	15
1	YOF	DC-offset for Y	0	0	0	0	0	0	0	7	5	7	7
2	CBOF	DC-offset for Cb	35	35	35	37	40	31	35	49	32	49	49
3	CROF	DC-offset for Cr	36	36	36	39	41	31	36	49	31	49	49
4	SBRT	Sub Bright											
5	RDRV	R output drive											
6	GDRV	G output drive	31										
7	BDRV	B output drive											
8	RCUT	R output cutoff											
9	GCUT	G output cutoff	31										
10	BCUT	B output cutoff											

			46WT500			
			Vivid	Std	Movie	Pro
11	WBSW	WB_S	0 (no memory)	0 (no memory)	0 (no memory)	0 (no memory)
12	SBOF	Offset for SBRT	63	63 (no memory)	63	63 (no memory)
13	RDOF	Offset for RDRV	64	63 (no memory)	66	63 (no memory)
14	GDOF	Offset for GDRV	63	63 (no memory)	63	63 (no memory)
15	BDOF	Offset for BDRV	68	63 (no memory)	55	63 (no memory)
16	RCOF	Offset for RCUT	62	63 (no memory)	64	63 (no memory)
17	GCOF	Offset for GCUT	63	63 (no memory)	63	63 (no memory)
18	BCOF	Offset for BCUT	66	63 (no memory)	61	63 (no memory)

CRT Driver CXA2150P-2 settings for Vivid mode

Reg.No	&Name	FUNCTION						
0	ALBK	PIC_ON:RGB output including AKB reference pulse on/off	1					
1	RGBS	R_ON/G_ON/B_ON : R/G/B outputs on/off	7					
2	BLKB	BLK_BTM:RGB output bottom limit level	3					
3	LIML	PLIMIT_LEV:Threshold level for excessively high inputs	0					
4	PABL	P_ABL:DC-level in RGB output detection for PEAK ABL	15					
5	SABL	S_ABL:S ABL gain	0					
6	AGNG	AGING_W/AGING_B:AGING_W/AGING_B modes on/off	0					
7	AKBO	AKBOFF:Automatic/Manual =Cut off setting	0					
			RF/Video1-4	Video5,6 480i	Video5,6 480P	Video5,6 1080i	P&P	
8	SYPH	SYNC_PHASE:Hsync delay with respect to Video	0	0	0	0	0	
9	CLPH	CLP_PHASE:Internal clamp pulse phase	3	3	3	3	3	
10	CLGA	CLP_GATE:Switch for the gated internal clamp pulse with Hsync	0	0	0	0	0	
11	JAXS	JAXIS:color axis switch	0					
12	BLKO	BLKO:Blanking switch	0					

CRT Driver CXA2150P-3									
Reg.No	&Name	FUNCTION	Vivid						
			RF	Cvideo	Svideo	Video5,6 480i	Video5,6 480P	Video5,6 1080i	P&P
0	SYSM	SYSTEM:Signal bandwidth setting	1	1	1	1	1	2	2
1	UVML	VM_LEV:VM_OUT level	3	3	3	2	2	3	3
2	VMMO	System Micro pin#40	1	1	1	1	1	1	0
3	VMCR	VM_COR:VM_OUT coring level	0	0	0	1	1	3	3
4	VMLM	VM_LMT:VM_OUT limit level	3	3	3	3	3	3	3
5	VMF0	VM F0: VM f0	2	2	2	2	2	2	2
6	VMDL	VM_DLY:VM_OUT phase	1	2	2	2	2	0	1
7	SHOF	Offset for USHP=SHOF x 4	0	1	1	2	3	3	3
8	SHF0	SHP_F0:Sharpness circuit f0	1	1	1	1	1	0	1
9	PROV	PRE/OVER:Y signal pre/over-shoot ratio	0	0	0	3	3	3	3
10	F1LV	SHP_F1:Sharpness for higher f0	0	0	0	0	1	3	3
11	CDSP	SHP_CD:Sharpness in part of high color saturation	3	3	3	3	3	3	3
12	LTLV	LTI_LEV:Luminance transient improvement	3	3	3	3	3	3	3
13	LTMD	LTI_MODE:LTI mode setting	1	1	1	1	0	0	1
14	CTLV	CTI_LEV:Chrominance transient improvement	0	0	0	0	0	0	0
15	CTMD	CTI_MODE:CTI mode setting	0	0	0	0	0	0	0
16	UBOF	Offset for UBRT	0	0	0	0	7	9	7
17	UCOF	Offset for UCOL=UCOF x 2	3	3	3	3	3	0	2
18	UHOF	Offset for UHUE	0	0	0	0	0	0	0
19	MIDE	MID enhancement setting	3	15	15	7	11		

CRT Driver CXA2150P-2 Video7 Settings for Vivid Mode						
Reg.No	&Name	FUNCTION				
0	ALBK		-			
1	RGBS		-			
2	BLKB		-			
3	LIML		-			
4	PABL		-			
5	SABL		-			
6	AGNG		-			
7	AKBO		-			
			Video7 VGA	Video7 480i	Video7 480P	Video7 1080i
8	SYPH	SYNC_PHASE:Hsync delay with respect to Video	0	0	0	0
9	CLPH	CLP_PHASE:Internal clamp pulse phase	3	3	3	3
10	CLGA	CLP_GATE:Switch for the gated internal clamp pulse with Hsync	0	0	0	0
11	JAXS		-			
12	BLKO		-			

CRT Driver CXA2150P-3 DVI Settings

Reg.No	&Name	FUNCTION	Vivid			
			Video7 VGA	Video7 480i	Video7 480p	Video7 1080i
0	SYSM	SYSTEM:Signal bandwidth setting	2	1	1	3
1	UVML	VM_LEV:VM_OUT level	2	2	2	3
2	VMMO	System Micro pin#40	1	1	1	1
3	VMCR	VM_COR:VM_OUT coring level	0	0	0	0
4	VMLM	VM_LMT:VM_OUT limit level	3	3	3	3
5	VMF0	VM F0: VM f0	0	1	1	0
6	VMDL	VM_DLY:VM_OUT phase	2	1	1	2
7	SHOF	Offset for USHP=SHOF x 4	0	2	2	3
8	SHF0	SHP_F0:Sharpness circuit f0	1	1	1	1
9	PROV	PRE/OVER:Y signal pre/over-shoot ratio	3	3	3	3
10	F1LV	SHP_F1:Sharpness for higher f0	0	0	0	0
11	CDSP	SHP_CD:Sharpness in part of high color saturation	3	3	3	3
12	LTLV	LTI_LEV:Luminance transient improvement	0	3	3	3
13	LTMD	LTI_MODE:LTI mode setting	1	0	0	1
14	CTLV	CTI_LEV:Chrominance transient improvement	0	0	0	3
15	CTMD	CTI_MODE:CTI mode setting	0	0	0	0
16	UBOF	Offset for UBRT	2	2	2	2
17	UCOF	Offset for UCOL=UCOF x 2	0	1	0	0
18	UHOF	Offset for UHUE	0	0	0	0
19	MIDE	MID enhancement setting	8	7	11	0

CRT Driver CXA2150P-3 settings for standard, movie and pro

Reg.No	&Name		Standard							Movie							Pro						
			RF	CV	SV	V5,6 480i	V5,6 480P	V5,6 1080i	P&P	RF	CV	SV	V5,6 480i	V5,6 480P	V5,6 1080i	P&P	RF	CV	SV	V5,6 480i	V5,6 480P	V5,6 1080i	P&P
#0	SYSM		1	1	1	1	1	2	2	1	1	1	1	1	2	2	1	1	1	1	1	2	2
#1	UVML		2	2	2	2	2	2	3	1	1	1	1	1	1	1	0	0	0	0	0	0	0
#2	VMMO		1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
#3	VMCR		1	0	0	1	1	3	3	1	1	1	1	1	3	3	3	3	3	3	3	3	3
#4	VMLM		3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
#5	VMF0		2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
#6	VMDL		0	2	2	2	2	1	1	1	2	2	2	2	1	1	2	2	2	2	2	1	1
#7	SHOF		1	0	0	0	2	3	3	1	1	1	1	1	1	1	0	0	0	0	0	0	0
#8	SHF0		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
#9	PROV		0	3	0	0	0	0	0	3	3	3	3	2	2	3	3	3	3	2	3	2	2
#10	F1LV		0	0	0	0	1	3	3	0	0	0	1	2	3	3	0	0	0	1	2	3	3
#11	CDSP		3	3	3	3	3	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0
#12	LTLV		2	2	2	2	2	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
#13	LTMD		1	1	1	1	1	0	1	1	1	1	1	1	0	1	1	1	1	1	1	0	1
#14	CTLV		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
#15	CTMD		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
#16	UBOF		7	7	7	7	7	9	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
#17	UCOF		1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
#18	UHOF		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
#19	MIDE		2	14	14	6	10	--	--	1	13	13	5	9	--	--	0	12	12	4	8	--	--

NVM ADDRESS: see the next page

CRT Driver CXA2150P-3

Reg.No	&Name	FUNCTION	SNNR=0	SNNR=1	SNNR=2	SNNR=3
#1	UVML		0	0	0	0
#3	VMCR		0	+1	+2	+3
#10	F1LV		0	-1	-2	-3
#11	CDSP		0	0	0	0
#12	LTLV		0	0	0	0
#14	CTLV		0	0	0	0
#19	MIDE		0	0	0	0

CRT Driver CXA2150P-3 Video7 settings for standard, movie and pro

Reg.No	&Name		Standard				Movie				Pro			
			Video7 VGA	Video7 480i	Video7 480p	Video7 1080i	Video7 VGA	Video7 480i	Video7 480p	Video7 1080i	Video7 VGA	Video7 480i	Video7 480p	Video7 1080i
#0	SYSM		2	1	1	3	2	1	1	3	2	2	2	3
#1	UVML		2	2	2	2	2	1	1	1	2	0	0	0
#2	VMMO		1	1	1	1	1	0	0	0	1	0	0	0
#3	VMCR		0	0	0	0	0	0	0	0	0	0	0	0
#4	VMLM		3	3	3	3	3	3	3	3	3	3	3	3
#5	VMF0		0	1	1	0	0	1	1	0	0	0	0	0
#6	VMDL		2	1	1	2	2	1	1	2	2	2	2	2
#7	SHOF		0	3	3	3	0	1	1	1	0	0	0	2
#8	SHF0		1	1	1	1	1	1	1	1	1	1	1	1
#9	PROV		3	3	3	3	3	3	3	3	3	3	3	3
#10	F1LV		0	0	0	0	0	0	0	0	0	0	0	0
#11	CDSP		3	3	3	3	0	0	0	0	0	0	0	0
#12	LTLV		0	2	3	3	0	1	2	2	0	0	0	0
#13	LTMD		1	1	0	1	1	1	1	1	1	1	1	1
#14	CTLV		0	0	0	3	0	0	0	2	0	0	0	0
#15	CTMD		0	0	0	0	0	0	0	0	0	0	0	0
#16	UBOF		2	4	4	4	2	2	2	2	2	2	2	2
#17	UCOF		0	0	0	0	0	0	0	0	0	0	0	0
#18	UHOF		0	0	0	0	0	0	0	0	0	0	0	0
#19	MIDE		8	6	10	0	8	5	9	0	8	4	8	0

NVM ADDRESS: see the next page

CRT Driver CXA2150P-3

Reg.No	&Name	FUNCTION	SNNR=0	SNNR=1	SNNR=2	SNNR=3
#1	UVML		0	0	0	0
#3	VMCR		0	+1	+2	+3
#10	F1LV		0	-1	-2	-3
#11	CDSP		0	0	0	0
#12	LTLV		0	0	0	0
#14	CTLV		0	0	0	0
#19	MIDE		0	0	0	0

CRT Driver CXA2150P-4										
Reg.No	&Name	FUNCTION	Vivid	Standard	Movie	Pro				
0	UPIC	PICTURE:Picture	63	44	31	31				
1	UBRT	BRIGHT:Brightness	26	31	31	31				
2	UCOL	COLOR:Color	31	31	31	31				
3	UHUE	HUE:Hue	31	31	31	31				
4	USHP	SHARPNESS:Sharpness	32	40	31	31				
5	UTMP	Color Temperature	2	1	0	1				
6	UDCL	DCOL:Dynamic color setting	2	2	0	0				
			RF/Video1-4	Video5,6 480i	Video5,6 480P	Video5,6 1080i	P&P	Video7 vga	Video7 480i	Video7 480p	Video7 1080i
7	AXIS	COL_AXIS:color matrix setting	0	0	0	0	0	0	0	0	0
			Picture Mode Vivid								
			RF/Video1-4	Video5,6 480i	Video5,6 480P	Video5,6 1080i	P&P	Video7 vga	Video7 480i	Video7 480p	Video7 1080i
8	UGAM	GAMMA_L:RGB output GAMMA correction	5	4	4	1	5	0	4	4	1
9	AGAM	GAMMA_L---Void Data	---								
			UGAM-0	UGAM-1	UGAM-2	UGAM-3	UGAM-4	UGAM-5	UGAM-6	UGAM-7	
10	GSBO	Offset for SBRT	0	0	0	0	0	0	0	0	
11	GCOO	Offset for UCOL	0	0	0	0	0	0	0	0	
12	GHUO	Offset for UHUE	0	0	0	0	0	0	0	0	
			Picture Mode Vivid								
			RF/Video1-4	Video5,6 480i	Video5,6 480P	Video5,6 1080i	P&P	Video7 vga	Video7 480i	Video7 480p	Video7 1080i
13	UBLK	Initial Black Level	6	6	6	6	4	0	6	6	6
14	ABLK	--- Void Data	---								
			UBLK0	UBLK1	UBLK2	UBLK3	UBLK4	UBLK5	UBLK6	UBLK7	
15	DCTR	DC_TRAN:Y signal DC transmission	1	1	1	2	3	2	3	3	
16	DPIC	DPIC_LEV:Y signal AUTO PEDESTAL level	0	1	2	1	1	2	1	2	
17	DSBO	Offset for SBRT	7	7	7	7	7	7	7	7	
18	ABLM	ABL MODE:ABL mode	0	0	0	0	0	0	1	1	
			Full								
19	ABLT	ABL_TH:ABL current detection Vth control	0								
20	EPOF	Offset for UPIC=EPOF x - void Data	{A6 E9 1F}								
21	SPOF	Offset for UPIC=SPOF x - Not used	15	<< Only available at Vcomp1&2.							
			RF/Video1-4	Video5,6 480i	Video5,6 480P	Video5,6 1080i	P&P	Video7 vga	Video7 480i	Video7 480p	Video7 1080i
22	SCON	SUB_CONTRAST:SUB PICTURE	8	5	5	4	4	5	5	5	4
23	CLOF	Offset for UCOL	8	8	8	8	8	8	8	8	8
24	HUOF	Offset for UHUE	4	4	4	4	4	4	4	4	4
25	IDSW	Not used									
26	DATA	Display of vertical compression modes. Not use	0								

CRT Driver CXA2150P-4

Reg.No	&Name	FUNCTION														
			SNNR =0	SNNR =1	SNNR =2	SNNR =3										
#4	USHP	SHARPNESS:Sharpness	0	1	3	4										
			Picture Mode : Standard					Picture Mode : Movie					Picture Mode : Pro				
			RF & V1-4	V5,6 480i	V5,6 480P	V5,6 1080i	P&P	RF & V1-4	V5,6 480i	V5,6 480P	V5,6 1080i	P&P	RF & V1-4	V5,6 480i	V5,6 480P	V5,6 1080i	P&P
#8	UGAM	GAMMA_L:RGB output	2	2	2	1	1	0	0	0	0	0	0	0	0	0	0
		GAMMA correction	A6 22 07	A6 23 07	A6 24 07	A6 25 07	A6 26 07	A6 27 07	A6 28 07	A6 29 07	A6 2A 07	A6 2B 07	A6 2C 07	A6 2D 07	A6 2E 07	A6 2F 07	A6 30 07
			Video7 VGA	Video7 480i	Video7 480P	Video7 1080i		Video7 VGA	Video7 480i	Video7 480P	Video7 1080i		Video7 VGA	Video7 480i	Video7 480P	Video7 1080i	
#8	UGAM DVI	GAMMA_L:RGB output	0	2	2	1		0	0	0	0		0	0	0	0	
		GAMMA correction	A6 35 07	A6 36 07	A6 37 07	A6 38 07		A6 39 07	A6 3A 07	A6 3B 07	A6 3C 07		A6 3D 07	A6 3E 07	A6 3F 07	A6 40 07	
			Picture Mode : Standard					Picture Mode : Movie					Picture Mode : Pro				
			RF & V1-4	V5,6 480i	V5,6 480P	V5,6 1080i	P&P	RF & V1-4	V5,6 480i	V5,6 480P	V5,6 1080i	P&P	RF & V1-4	V5,6 480i	V5,6 480P	V5,6 1080i	P&P
#13	UBLK	Initial Black Level	3	3	3	3	3	1	1	1	1	1	0	0	0	0	0
			A6 22 38	A6 23 38	A6 24 38	A6 25 38	A6 26 38	A6 27 38	A6 28 38	A6 29 38	A6 2A 38	A6 2B 38	A6 2C 38	A6 2D 38	A6 2E 38	A6 2F 38	A6 30 38
			Video7 VGA	Video7 480i	Video7 480P	Video7 1080i		Video7 VGA	Video7 480i	Video7 480P	Video7 1080i		Video7 VGA	Video7 480i	Video7 480P	Video7 1080i	
#13	UBLK DVI	Initial Black Level	0	3	3	3		0	1	1	1		0	0	0	0	
			A6 35 38	A6 36 38	A6 37 38	A6 38 38		A6 39 38	A6 3A 38	A6 3B 38	A6 3C 38		A6 3D 38	A6 3E 38	A6 3F 38	A6 40 38	

CRT Driver CXA2150D-1

Reg.No	&Name	FUNCTION	1080i	FULL	NORMAL	ZOOM	WIDE ZOOM
0	VPOS	V_POSITION:Vertical position					
1	VSIZ	V_SIZE:Vertical size					
2	VSZO	V_SIZE OFFSET		0			
3	VLIN	V_LINEARITY:Vertical linearity		7			
4	VSCO	S_CORRECTION:Vertical S-correction	9	9		9	9
5	VCEN	VSAW0 DCH/VSAW0 DCL:Vertical center adjustment		31			
6	VPIN	VSAW0_AMP:Vertical PIN adjustment		15			
7	NSCO	VSAW1_DC:Rotation		7			
8	HTPZ	VSAW1_AMP:Horizontal trapezoid		15			
9	ZOOM	ZOOM_SW:Zoom switch	0		0	1	1
10	APSW	ASP_SW:Aspect switch	0	0	0	0	0
11	ASPT	V_ASPECT:Aspect ratio	0	0	0	44	22
12	SCRL	V_SCROLL:Vertical scroll	29	29	29	29	29
13	UVLN	UP_VLIN:Upper vertical linearity	0		0	0	5
14	LVLN	LO_VLIN:lower vertical linearity	0		0	0	5

CRT Driver CXA2150D-2

Reg.No	&Name	FUNCTION	1080i	FULL/NORM	ZOOM	WIDE ZOOM
0	HCNT	HC_PARA_DC:Horizontal center	19			
1	HPOS	H_POSITION:Horizontal position	25			
2	HSIZ	H_SIZE:Horizontal size				
3	SLIN	MP_PARA_DC:Horizontal S-correction				
4	MPIN	MP_PARA_AMP:Horizontal middle pin	0			0
5	PIN	PIN_AMP:Horizontal pin	10			10
6	PIN0	PIN AMP offset	7	7	7	7
7	UCP	UP_CPIN:Upper corner pin	31			31
8	LCP	LO_CPIN:Lower corner pin	31			31
9	UXCG	UP_UCG:Upper extra corner pin gain	0			0
10	LXCG	LO_UCG:Lower extra corner pin gain	0			0
11	UXCP	UP_UCP:Upper extra corner pin position	2			2
12	LXCP	LO_UCP:Lower extra corner pin position	2			2
13	XCPP	UC_POL:Extra corner pin polarity	0			0
14	PPHA	PIN_PHASE:Pin phase	31			
15	VANG	AFC_ANGLE:AFC angle	31			
16	LANG	HC_PARA_PHASE:Linearity angle	33			
17	VBOW	AFC_BOW:AFC bow	31			
18	LBOW	HC_PARA_AMP:Linearity bow	48			
19	CPY1	Copy function 1: * Not used	0			

CRT Driver CXA2150D-3

Reg.No	&Name	FUNCTION	1080i	Full	NORMAL	Zoom	WideZoom
0	HBLK	HBLK_SW:Horizontal blanking switch	1				
1	LBLK	LEFT_BLK:Left blanking	56	58			
2	RBLK	RIGHT_BLK:Right blanking	25	23			
3	VBLK	VBLK_SW:Vertical blanking switch	1		1	0	0
4	TBLK	UP_BLK:Top blanking	4	15	15	15	15
5	BBLK	LO_BLK:Bottom blanking	5	15	15	15	15
6	VCMP	V_COMP:Vertical compensation	0	0	0	0	0
7	HCMP	H_COMP:Horizontal compensation	0		0	0	0
8	ACMP	AFC_COMP:AFC compensation	0		0	0	0
9	PCMP	PIN_COMP:Pin compensation	0		0	0	0
10	AFCM	AFC_MODE:AFC compensation	2	3			
11	VFRQ	V_FREQ:Vertical frequency	1				
12	VON	V_ON:Vertical drive on	1				
13	JUMP	JMP_SW:Reference pulse jump switch	0				
14	VDJP	VDRV_SW:Vertical drive switch	1	1	1	1	1
15	VDST	RST_SW:Vertical drive start switch	0	0	0	0	0
16	EWDC	EW_DC:Pin DC level shift	0				
17	AKBT	AKBTIM:AKB timing	9	9	9	9	9

Component I/F & Sync Separation CXA2171

Reg.No	&Name	FUNCTION	Video5,6 480i	Video5,6 480P	Video5,6 1080i	Video5,6 720P	Video7 480i	Video7 480P	Video7 1080i	Video7 720P
			15.75khz	31.50khz	33.75khz	45khz	15.75khz	31.50khz	33.75khz	45khz
0	MTRX	MAT_OUT	0	0	1	1	0	0	1	1
1	GAIN	GAIN_SEL	0							
2	CBGN	CBGAIN	9							
3	VTC	V_TC	1							
4	HWID	H_WIDTH	1							
			Video5,6	Video7	Sub					
5	HSEP	HSEP_SEL	1	1	0					
6	TEST	TEST	0							
7	FRGB	No used	0							
			V5,6,7 1080i	ELSE						
8	HMSK	Hsync masking in vertical retrace	0	1						

Audio Processor BH3868FS

Reg.No	&Name	FUNCTION	
0	SVOL	Volume:Offset for Volume	0
1	SBAL	Balance Offset for Balance	7
2	SBAS	Bass:Offset for Bass	7
3	STRE	Treble:Offset for Treble	7
4	BBLP	BBE low pass filter	0
5	BBHP	BBE high pass filter	2
6	SREF	Surround effect	11
7	AGC	Auto gain control	0
8	BBE	BBE on/off	0

TruSurround NJM2180

Reg.No	&Name	FUNCTION	
0	TSMD	Trusurround effect selection	2
1	ATT	No used for Wide model	0

DLBY NJW1106

Reg.No	&Name	FUNCTION	
0	DBMD		0
1	SCH		0
2	ADSW		0
3	CECH		0
4	DELY		7
5	SSEL		0

MID-1

Reg.No	&Name	FUNCTION			
	Display Data				
0	DHPH	H active display area phase	110		
1	DVPH	V active display area phase	20		
2	DHAR	H active display area size	240		
3	DVAR	V active display area size	135		
4	DHPW	display H pulse width	55		
5	DVPW	display V pulse width	5		
22	DPSW	display PLL switch	1		
23	MDL	model select	0		
	Misc. Common Data		Data		
6	DYCD	display output Y-C delay correction	2		
7	DYSD	display output YS signal delay select	1		
	Favorite / Other		Normal	Favorite	Others
8	MDHP	main display picture H position	154	9	0
10	MDHS	main display picture H size	162	149	240
	Single / Favorite		Single 480i/480I	Single 720P	Favorite
9	MDVP	main display picture V position	30	30	20
11	MDVS	main display picture V size	120	120	97
	Index / Others		Index	Others	
12	MLHP	multi picture mode H position	36	36	
13	MLVP	multi picture mode V position	31	31	
	Favorite		Favorite		
14	SDHP	sub display picture H position	166		
15	SDVP	sub display picture V position	20		
	Favorite		Favorite		
16	SDHS	sub display picture H size	44		
17	SDVS	sub display picture V size	29		
	PinP Position				
18	PDHP		-		
19	PDVS		-		
	PinP Size				
20	PDHS		-		
21	PDVS		-		
	Single / Others		Single	Others	
24	BCOL	Backgraund Y level	5	5	

MID-2

Reg.No	&Name	FUNCTION				
	MID Mode, Wide mode, Input Signal Format		Single		Single	
			RF,Video, YC	YPbPr	RF,Video, YC	YPbPr
0	DRHP	DRC H active area position	142	141	111	110
1	DRHS	DRC H active area size	162	162	178	178
2	DRVP	DRC V active area position	37	37	37	37
3	DRVS	DRC V active area size	120	120	120	120

MID-2 (Continued)

			Twin, Favorite		Memo	
			RF,Video, YC	YPbPr	RF,Video, YC	YPbPr
0	DRHP	DRC H active area position	132	131	142	141
1	DRHS	DRC H active area size	166	166	162	162
2	DRVP	DRC V active area position	54	54	58	58
3	DRVS	DRC V active area size	112	112	110	110
			Index		Twin-Right	Scroll-Small
			RF,Video, YC	YPbPr	RF,Video, YC	RF
0	DRHP	DRC H active area position	139	138	138	143
1	DRHS	DRC H active area size	164	164	166	162
2	DRVP	DRC V active area position	50	50	54	54
3	DRVS	DRC V active area size	114	114	112	112

MID-3 : INPUT)

Reg.No &Name FUNCTION

	MID mode, Wide mode, Input Signal Format		Single			
			480P	720P	YPbPr No Sig.	
0	VDHP	VDO H active area position	109	95	205	
1	VDHS	VDO H active area pixel size	166	108	226	
2	VDVE	VDO V active area even position	37	24	37	
3	VDVS	VDO V active area line size	120	180	56	
			Twin, Favorite			Twin-Right
			480P	1080i	720P	YPbPr No Sig.	RF,Video, SV
0	VDHP	VDO H active area position	128	94	111	179	197
1	VDHS	VDO H active area pixel size	155	150	99	199	215
2	VDVE	VDO V active area even position	53	37	50	24	26
3	VDVS	VDO V active area line size	112	126	168	56	56
			Memo				
			480P	1080i	720P	YPbPr No Sig.	
0	VDHP	VDO H active area position	136	102	115	179	
1	VDHS	VDO H active area pixel size	152	147	98	199	
2	VDVE	VDO V active area even position	57	44	58	24	
3	VDVS	VDO V active area line size	110	123	164	56	
			Index				Index-Small
			480P	1080i	720P	YPbPr No Sig.	RF
0	VDHP	VDO H active area position	132	99	112	166	204
1	VDHS	VDO H active area pixel size	154	149	99	187	211
2	VDVE	VDO V active area even position	51	34	48	24	26
3	VDVS	VDO V active area line size	113	128	169	56	56
	Input Signal Format						
			RF,Video, S-Video, YPbPr 480		480P	1080i	720P
4	VDVO	VDO V active area line size	0		0	0	0
5	VCPO	VDO V active area odd position	95		70	40	40
6	VCWD	VDO clamp pulse output timing	3		3	3	3
7	VYCD	VDO clamp pulse width	0		0	0	0
8	VSTP	VDO PLL phase ditect stop line count	-		119	160	146
9	VSTT	VDO PLL phase ditect start line count	-		4	0	0
10	VHSC	VDO H sync cycle	130		-	-	-

MID-5 Enhance Table Data Setting

			RF				YPbPr-480i			
0	P-OP	Table select	0	1	2	3	4	5	6	7
1	MHLY	Main H LPF Y Coefficient select	1	1	1	1	1	1	1	1
2	MHLC	Main H LPF C Coefficient select	3	3	3	3	3	3	3	3
3	MVLY	Main V LPF Y Coefficient select	0	0	0	0	0	0	0	0
4	MVLC	Main V LPF C Coefficient select	0	0	0	0	0	0	0	0
5	MHYR	Main H Enhance. Y Coreing level	1	1	2	1	0	0	0	1
6	MHYL	Main H Enhance. Y Clip level	1	1	1	1	1	1	1	1
7	MHYE	Main H Enhance. Y Enhancement level	7	7	3	3	3	3	3	5
8	MHYC	Main H Enhance. Y Coefficient select	1	1	1	1	1	1	1	1
9	MHCR	Main H Enhance. C Coreing level	0	0	0	0	0	0	0	0
10	MHCL	Main H Enhance. C Clip level	1	1	1	1	1	1	1	1
11	MHCE	Main H Enhance. C Enhancement level	0	0	0	0	0	0	0	0
12	MHCC	Main H Enhance. C Coefficient select	1	1	1	1	1	1	1	1
13	MVYR	Main V Enhance. Y Coreing level	0	0	2	2	0	0	2	2
14	MVYL	Main V Enhance. Y Clip level	1	1	1	0	1	1	1	1
15	MVYE	Main V Enhance. Y Enhancement level	0	0	2	5	0	0	2	5
16	MVCR	Main V Enhance. C Coreing level	0	0	0	0	0	0	0	0
17	MVCL	Main V Enhance. C Clip level	1	1	1	1	1	1	1	1
18	MVCE	Main V Enhance. C Enhancement level	0	0	0	0	0	0	0	0
			YPbPr-480p				Cvideo/Svideo			
0	P-OP	Table select	8	9	10	11	12	13	14	15
1	MHLY	Main H LPF Y Coefficient select	0	0	0	0	1	1	1	1
2	MHLC	Main H LPF C Coefficient select	3	3	3	3	3	3	3	3
3	MVLY	Main V LPF Y Coefficient select	0	0	0	0	0	0	0	0
4	MVLC	Main V LPF C Coefficient select	0	0	0	0	0	0	0	0
5	MHYR	Main H Enhance. Y Coreing level	0	0	0	1	0	0	0	1
6	MHYL	Main H Enhance. Y Clip level	1	1	1	1	1	1	1	1
7	MHYE	Main H Enhance. Y Enhancement level	7	7	3	5	7	7	3	3
8	MHYC	Main H Enhance. Y Coefficient select	1	1	1	1	1	1	1	1
9	MHCR	Main H Enhance. C Coreing level	0	0	0	0	0	0	0	0
10	MHCL	Main H Enhance. C Clip level	1	1	1	1	1	1	1	1
11	MHCE	Main H Enhance. C Enhancement level	0	0	0	0	0	0	0	0
12	MHCC	Main H Enhance. C Coefficient select	1	1	1	1	1	1	1	1
13	MVYR	Main V Enhance. Y Coreing level	0	0	2	2	0	0	2	2
14	MVYL	Main V Enhance. Y Clip level	1	1	1	1	1	1	1	1
15	MVYE	Main V Enhance. Y Enhancement level	0	0	2	5	0	0	2	5
16	MVCR	Main V Enhance. C Coreing level	0	0	0	0	0	0	0	0
17	MVCL	Main V Enhance. C Clip level	1	1	1	1	1	1	1	1
18	MVCE	Main V Enhance. C Enhancement level	0	0	0	0	0	0	0	0

On-Screen Display

Reg.No	&Name	FUNCTION	
0	HPOS	OSD horizontal position	
1	HPOF	Horizontal position for Favorite mode	
2	VPOS	OSD vertical position	4
3	VPOT	Vertical position for P&Pmode	40

SNNR

Reg.No	&Name	FUNCTION					
0	SNNR	SNNR data setting	0	1	2	3	
1	SNFX	Selection of SNNR data setting	0				
2	WSLT	Noise level detection data thresholds for SNNR data	0 ~ 30	31 ~ 62	63 ~ 126	127 ~ 255	
		SNNR Settings based on WSL Data					
	SNNR=0/1/2/3		0	1	2	3	
3	CPFG	Related to 3D-COMB / #19 YPFG settings	0	1	2	3	SNNR data is used for the (-) offset setting.
4	CPFT	Related to 3D-COMB / #18 YPFT settings	0	0	0	0	
5	CCOR	Related to 3D-COMB / #20 VHCO settings	0	1	1	1	SNNR data is used for the direct setting.
6	CHCG	Related to 3D-COMB /#21 VHCG settings	1	1	1	1	
7	CAPG	Related to 3D-COMB / #16 VAPG settings	0	0	0	0	
8	3SHP	Related to CXA2103 / #6 SHAP settings	0	1	2	3	
9	MIDD	Related to CXA2150P-3 / #19 MIDE settings	0	0	0	0	
10	5SHP	Related to CXA2150P-4 / #4 USHP settings	0	1	3	4	SNNR data is used for the (-) offset setting.
11	5YF1	Related to CXA2150P-3 / #10 F1LV settings	0	1	2	3	
12	5CDS	Related to CXA2150P-3 / #11 CDSP settings	0	0	0	0	
13	5LTI	Related to CXA2150P-3 / #12 LTLV settings	0	0	0	0	
14	5CTI	Related to CXA2150P-3 / #14 CTLV settings	0	0	0	0	
15	5VML	Related to CXA2150P-3 / #1 UVML settings	0	0	0	0	
16	5YMC	Related to CXA2150P-3 / #3 VMCR settings	0	1	2	3	SNNR data is used for the (+) offset setting.

ID-1 Detection

Reg.No	&Name	FUNCTION	
0	XJGL	XJGLK:Setting for memorizing or not the ID-1 detection status	0
1	LNJI	LNJI:Setting for the multi/single-line ID-1 detection	0

Closed Caption Display & Parental Control

Reg.No	&Name	FUNCTION	
0	HPRM	Horizontal position of CCD	
1	HPRS	Horizontal position of CCD	
2	RND	OSD rounding control	1
3	CCDI	Interruption control	3
4	CRIP	CRI count & parity count	4
5	CRIT	Charge/Discharge timing control for slice voltage level	0
6	CHMK	Horizontal mask width	42
7	FPOL	Field polarity selection	1
8	LANG		0
9	DATA	Switch for CCD service/test data	0
10	VCHIP	Selection of Vchip controls	1

OPTIONS

Reg.No	&Name	FUNCTION	
0	DLY1	Power-On to RLY timing = DLY1 x 50ms	2
1	DLY2	Power-On Mute timing =DLY2 x 50ms	12
2	DLY3	Relay-On to start Bus communication	12
3	AGC		255
4	PCMX		63
5	BRMX		63
6	RAMW		0
7	SOFF		0

PJ Engine								
ITEM No.	ITEM Name	Contents	min	max	Normal	Zoom	W Zoom	HD
0	FDIS	Switch of display for fine adjustment data	0	1	-			
1	COPY	Service copy adjustment	0	1	-			
2	ALCP	Service all copy adjustment	0	1	-			
3	OSDH	Osd horizontal position of PJED service menu	1	255	22			
4	OSDV	Osd vertical position of PJED service menu	1	255	100	120	100	60
5	FVSL	Start position of fine adjustment	0	15	0	14	15	0
6	FVSP	Start line of fine adjustment	0	255	3	21	25	53
7	V1DL	Value of V1 delay	0	255	1	139	60	1
8	V1CU	Value of V1 count up	0	4095	454	598	506	387
9	V1OH	Value of V1 offset upper data	0	255	5	5	5	79
10	V1OL	Value of V1 offset lower data	0	255	0	0	0	0
11	OEVP	Odd/Even select positioin	0	4095	1056			
12	COHP	Horizontal phase for rough adjustment	0	4095	0			
13	34CS	Start center clamp positioin of H3 and H4 pulse	0	31	14			
14	34CW	Width center clamp position of H3 and H4 pulse	0	31	0			
15	FIHP	Horizontal phase for fine adjustment	0	4095	1104			
16	TPHP	Horizontal phase for test pattern	0	4095	69			
17	TPVP	Vertical phase for test pattern	0	255	55	111	79	15
18	DFHP	Horizontal phase for dynamic focus	0	4095	250			
19	DFHG	Value of horizontal parabola wave for dynamic focus	-128	127	-70	-70	-70	-70
20	DFVG	Value of vertical parabola wave for dynamic focus	-128	127	-65	-65	-65	-65
21	DFDC	Value of center for dynamic focus	-128	127	127	127	127	127
22	DFV1	Value of V1 saw wave for dynamic focus	-128	127	-50	-50	-50	-50
23	SDHP	Compensation of horizontal phase for shading	0	4095	422			
24	SDH1	Value of horizontal saw wave for dynamic focus	-128	127	127	127	127	127
25	RVCS	Start positioin of Red vertical clamp	0	31	0			
26	RVCW	Width of Red vertical clamp	0	31	0			
27	GVCS	Start position of Green vertical clamp	0	31	0			
28	GVCW	Width of Green vertical clamp	0	31	0			
29	BVCS	Start position of Blue vertical clamp	0	31	0			
30	BVCW	Width of Blue vertical clamp	0	31	0			
31	RHCS	Start position of Red horizontal clamp	0	31	0			
32	RHCW	Width of Red horizontal clamp	0	31	0			

PJ Engine								
ITEM No.	ITEM Name	Contents	min	max	Normal	Zoom	W Zoom	HD
33	GHCS	Start position of Green horizontal clamp	0	31	0			
34	GHCW	Width of Green horizontal clamp	0	31	0			
35	BHCS	Start position of Blue horizontal clamp	0	31	0			
36	BHCW	Width of Blue horizontal clamp	0	31	0			
37	BDVU	Vertical position for border line 1	0	2047	28	21	12	49
38	BDVL	Vertical position for border line 2	0	2047	900	683	820	1039
39	BDHL	Horizontal position for border line 1	0	2047	148			
40	BDHR	Horizontal position for border line 2	0	2047	1262			
41	HBLD	Horizontal phase for output of H.Blank out	0	4095	0			
42	HBLW	Width for output of H.Blank out	0	4095	0			
43	PWM2	PWM2 output width setting of Regi IC	0	4095	345			
44	COGV	Green vertical center offset data for Auto Regi.	-128	127	0			
45	CORV	Red vertical center offset data for Auto Regi.	-128	127	0			
46	COBV	Blue vertical center offset data for Auto Regi.	-128	127	0			
47	COGH	Green horizontal center offset data for Auto Regi.	-128	127	0			
48	CORH	Red horizontal center offset data for Auto Regi.	-128	127	0			
49	COBH	Blue horizontal center offset data for Auto Regi.	-128	127	0			
50	SOGV	Green vertical skew offset data for Auto Regi.	-128	127	0			
51	SORV	Red vertical skew offset data for Auto Regi.	-128	127	0			
52	SOBV	Blue vertical skew offset data for Auto Regi.	-128	127	0			
53	SOGH	Green horizontal skew offset data for Auto Regi.	-128	127	0			
54	SORH	Red horizontal skew offset data for Auto Regi.	-128	127	0			
55	SOBH	Blue horizontal skew offset data for Auto Regi.	-128	127	0			
56	ZOGH	Green horizontal size offset data for Auto Regi.	-128	127	0			
57	ZORH	Red horizontal size offset data for Auto Regi.	-128	127	0			
58	ZOBH	Blue horizontal size offset data for Auto Regi.	-128	127	0			
59	LOGH	Green horizontal linearity offset data for Auto Regi.	-128	127	0			
60	LORH	Red horizontal linearity offset data for Auto Regi.	-128	127	0			
61	LOBH	Blue horizontal linearity offset data for Auto Regi.	-128	127	0			
62	ERR	Auto Regi. Error code	0	-	0			
63	ADTM	A/D data input timing of Auto Regi.	0	127	144			
64	VUP	Auto Regi. Pattern Upper vertical position	0	2047	50			
65	VUPM	Auto Regi. Pattern Upper middle vertical position	0	2047	0			
66	VMID	Auto Regi. Pattern Middle vertical position	0	2047	512			

PJ Engine

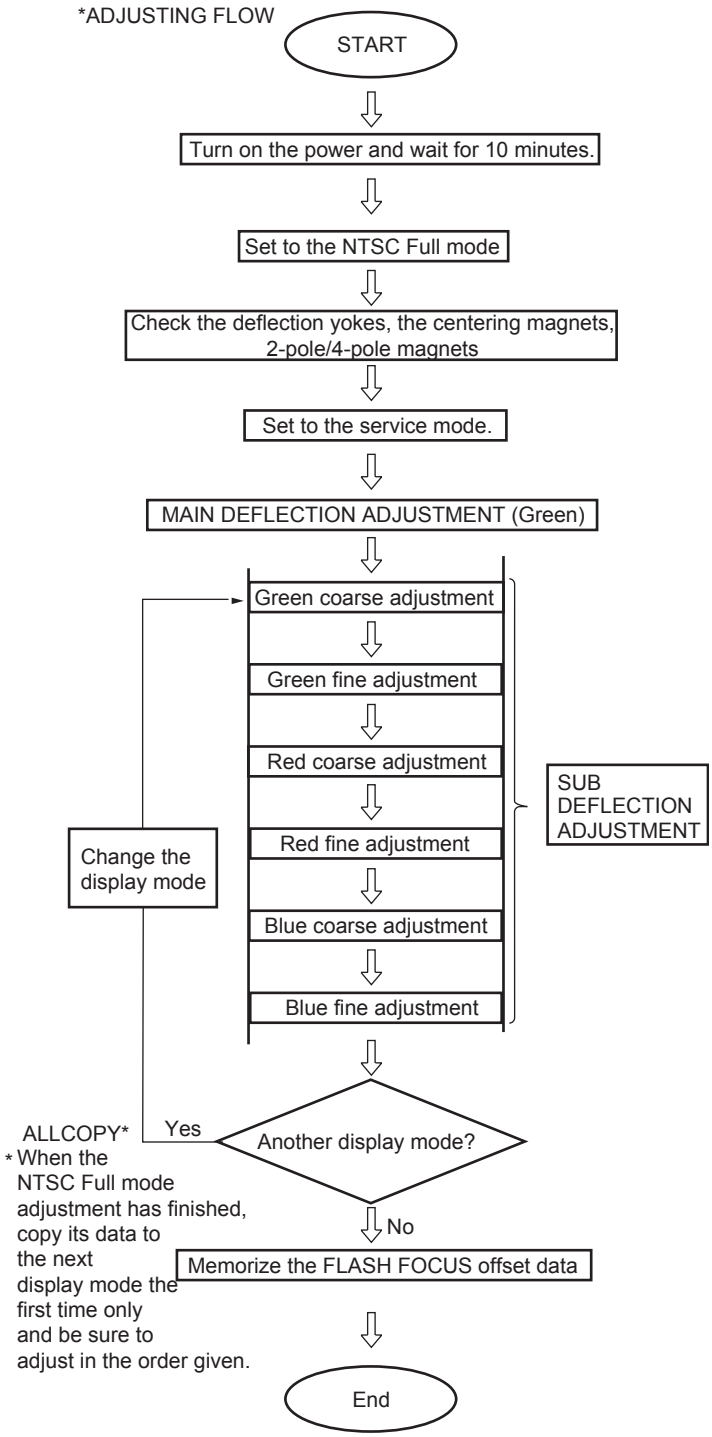
ITEM No.	ITEM Name	Contents	min	max	16:9			
					Normal	Zoom	W Zoom	HD
67	VLOM	Auto Regi. Pattern Lower middle vertical position	0	2047	0			
68	VLOW	Auto Regi. Pattern Lower vertical position	0	2047	975			
69	HLE	Auto Regi. Pattern left horizontal position	0	4095	90			
70	HLEM	Auto Regi. Pattern left middle horizontal position	0	4095	0			
71	HMID	Auto Regi. Pattern middle horizontal position	0	4095	655			
72	HRIM	Auto Regi. Pattern right middle horizontal position	0	4095	0			
73	HRIV	Auto Regi. Pattern right horizontal position	0	4095	1215			
74	SFTF	Switch of shift fast	0	1	0			
75	ACTL	Account timer counter lower byte	0	-	0			
76	ACTH	Account timer counter upper byte	0	-	0			
77	SLSW	Auto Regi adjustment item select	0	3	3			
78	VB2S		0	1023	0	0	0	0
79	VB2W		0	1023	49	106	68	9
80	VB3S		0	1023	521	464	502	561
81	VB3W		0	1023	42	99	61	1

ITEM No.	ITEM Name	Contents	min	max	16:9					
					Green H	Green V	Blue H	Blue V	Red H	Red V
82	CENT	Normal/Full Coarse Center Adjustment	-512	511						
83	SKEW	Normal/Full Coarse Skew Adjustment	-512	511						
84	SIZE	Normal/Full Coarse Size Adjustment	-512	511						
85	LIN	Normal/Full Coarse Linearity Adjustment	-512	511						
86	KEY	Normal/Full Coarse Key Adjustment	-512	511	-		-		-	
87	PIN	Normal/Full Coarse Pin Adjustment	-512	511						
88	MLIN	Normal/Full Coarse Middle Linearity Adjustment	-512	511		-		-		-
89	MSIZ	Normal/Full Coarse Middle Size Adjustment	-512	511		-		-		-
82	CENT	Zoom Coarse Center Adjustment	-512	511						
83	SKEW	Zoom Coarse Skew Adjustment	-512	511						
84	SIZE	Zoom Coarse Size Adjustment	-512	511						
85	LIN	Zoom Coarse Linearity Adjustment	-512	511						
86	KEY	Zoom Coarse Key Adjustment	-512	511	-		-		-	
87	PIN	Zoom Coarse Pin Adjustment	-512	511						
88	MLIN	Zoom Coarse Middle Linearity Adjustment	-512	511		-		-		-
89	MSIZ	Zoom Coarse Middle Size Adjustment	-512	511		-		-		-
82	CENT	Wide Zoom Coarse Center Adjustment	-512	511						
83	SKEW	Wide Zoom Coarse Skew Adjustment	-512	511						
84	SIZE	Wide Zoom Coarse Size Adjustment	-512	511						
85	LIN	Wide Zoom Coarse Linearity Adjustment	-512	511						
86	KEY	Wide Zoom Coarse Key Adjustment	-512	511	-		-		-	
87	PIN	Wide Zoom Coarse Pin Adjustment	-512	511						
88	MLIN	Wide Zoom Coarse Middle Linearity Adjustment	-512	511		-		-		-
89	MSIZ	Wide Zoom Coarse Middle Size Adjustment	-512	511		-		-		-
82	CENT	HD Coarse Center Adjustment	-512	511						
83	SKEW	HD Coarse Skew Adjustment	-512	511						
84	SIZE	HD Coarse Size Adjustment	-512	511						
85	LIN	HD Coarse Linearity Adjustment	-512	511						
86	KEY	HD Coarse Key Adjustment	-512	511	-		-		-	
87	PIN	HD Coarse Pin Adjustment	-512	511						
88	MLIN	HD Coarse Middle Linearity Adjustment	-512	511		-		-		-
89	MSIZ	HD Coarse Middle Size Adjustment	-512	511		-		-		-

PJ Engine			
Contents	min	max	data
Normal/Full Red Horizontal Fine Data	-128	127	0
Normal/Full Red Vertical Fine Data	-128	127	0
Normal/Full Green Horizontal Fine Data	-128	127	0
Normal/Full Green Vertical Fine Data	-128	127	0
Normal/Full Blue Horizontal Fine Data	-128	127	0
Normal/Full Blue Vertical Fine Data	-128	127	0
Normal/Full Zoom Red Horizontal Fine Data	-128	127	0
Zoom Red Vertical Fine Data	-128	127	0
Zoom Green Horizontal Fine Data	-128	127	0
Zoom Green Vertical Fine Data	-128	127	0
Zoom Blue Horizontal Fine Data	-128	127	0
Zoom Blue Vertical Fine Data	-128	127	0
Wide Zoom Red Horizontal Fine Data	-128	127	0
Wide Zoom Red Vertical Fine Data	-128	127	0
Wide Zoom Green Horizontal Fine Data	-128	127	0
Wide Zoom Green Vertical Fine Data	-128	127	0
Wide Zoom Blue Horizontal Fine Data	-128	127	0
Wide Zoom Blue Vertical Fine Data	-128	127	0
HD Red Horizontal Fine Data	-128	127	0
HD Red Vertical Fine Data	-128	127	0
HD Green Horizontal Fine Data	-128	127	0
HD Green Vertical Fine Data	-128	127	0
HD Blue Horizontal Fine Data	-128	127	0
HD Blue Vertical Fine Data	-128	127	0

ID			
Reg.No	&Name	FUNCTION	
0	ID0	Selection of OSD languages & color systems	89
1	ID1	Selection of composite & s-video inputs	127
2	ID2	Selection of audio-related controls	239
3	ID3	Selection of basic system settings	98
4	ID4	Selection of basic system settings	203
5	ID5	Selection of advanced system settings	177
6	ID6	Selection of sub picture related settings	54
7	ID7	Selection of some reserved settings	24

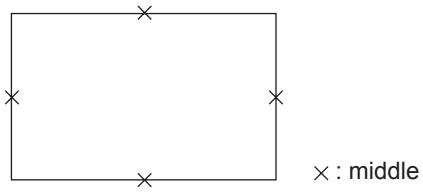
2-12. REGISTRATION ADJUSTMENTS


*ADJUSTING FLOW
START
Turn on the power and wait for 10 minutes.
Set to the NTSC Full mode
Check the deflection yokes, the centering magnets, 2-pole/4-pole magnets
Set to the service mode.
MAIN DEFLECTION ADJUSTMENT (Green)
Green coarse adjustment
Green fine adjustment
Red coarse adjustment
Red fine adjustment
Blue coarse adjustment
Blue fine adjustment
SUB DEFLECTION ADJUSTMENT
Change the display mode
Another display mode?
Yes
No
ALLCOPY*
* When the NTSC Full mode adjustment has finished, copy its data to the next display mode the first time only and be sure to adjust in the order given.
Memorize the FLASH FOCUS offset data
End

2-12-1. SETUP FOR ADJUSTMENT

MARKING

- At the 4 sides of the screen, use a tape measure to locate the middle.



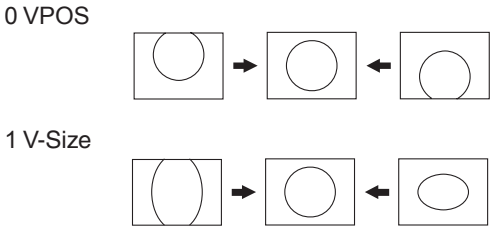
DATA SETTING

1. Set NTSC Full mode.
2. Enter the service mode, and select “PJE”.

2-12-2. MAIN DEFLECTION ADJUSTMENT

NOTE: Before this adjustment, refer to section 2-11 for PJE input data items #78-85.

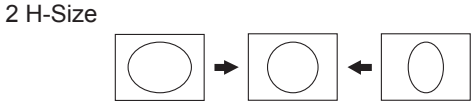
1. Cover the red and blue CRT lenses with lens caps to allow only green to show (or use the method shown in the note below for turning off the CRTs individually without using lens caps).
2. Enter the monoscope signal and set to NTSC Full mode.
3. Enter the service mode, and select “2150D-1”.
4. Adjust “0 VPOS” and “1 VSIZ” so that the picture is displayed in the center of the screen.
5. Adjust “2VSZ0” for 1080i vertical size adjustment.



6. Select “2150D-2” and adjust “2 H-Size” so that the picture size is within the specification.

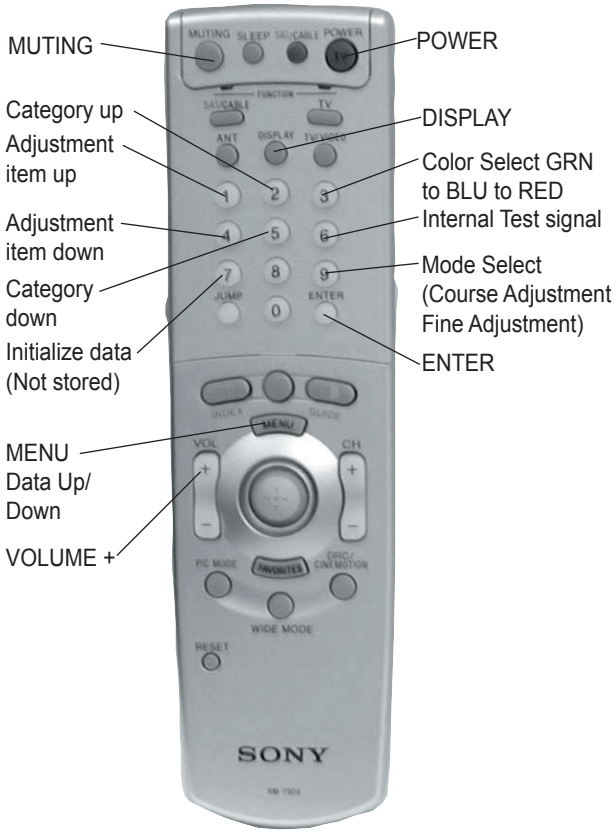
SPEC Overscan Spec. = 9%

Input Signal	H SIZE	V SIZE
Monoscope	15.6 ± 0.2 sq.	11.5 ± 0.2 sq.



7. Copy the data of the NTSC Full mode to the other display mode and, if necessary, adjust in the other mode.

2-12-3.OPERATION METHOD FOR PROJECTOR ENGINE MODE



RM-Y909

1. FUNCTION OF KEYS ON COMMANDER

① Changes adjustment item. (Item # moves up)
Marker moves clockwise from center to outside.
(In Fine Adjustment mode)

④ Changes adjustment item. (Item # moves down)
Marker moves counter clockwise from outside to center.
(In Fine Adjustment mode)

② Changes adjustment category.
(Category # moves up)

⑤ Changes adjustment category.
(Category # moves down)

Joystick Changes data value. (Up or down)
Marker moves clockwise from center
(up, down, right, and then left) to outside.
(In Fine Adjustment mode)

③ Changes adjustment color.
GRN →BLU →RED

⑥ Displays or changes internal test signals.
crosshatch + external signal →
crosshatch + borderline →
crosshatch only →
dot only → off

⑨ Switches adjustment mode.
Coarse adjustment model →
Fine adjustment mode

Press Switches marker moving method.

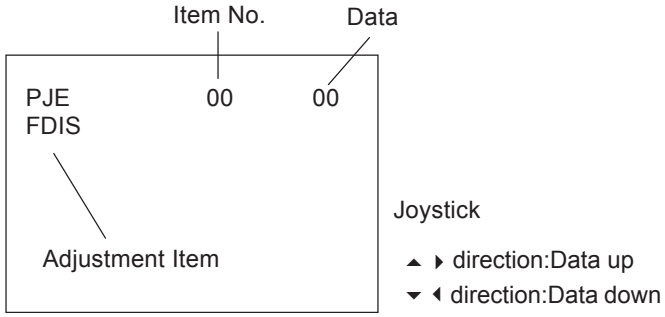
Joystick (In Fine Adjustment mode)
Joystick ▲ ▼ ◀ ▶ keys → **1** and **4** buttons

Commander Function

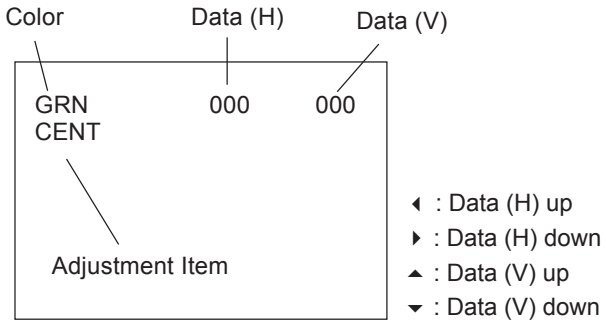
Buttons	Mode	Description
0 + ENTER	READ	Reads data to NVM.
MUTING+ENTER	WRITE	Writes data from NVM.
7 + ENTER	PJE INITIAL	Service data initialization. Not stored. (Be sure not to use usually)

2. OPERATION METHOD FOR COARSE ADJUSTMENT

1. Enter the service mode and select “PJE”.
2. Press the “1” or “4” button on the remote commander to select the item, and then use the joystick to change the data.



3. Select “GRN CENT”. When BLU or RED is displayed, press the “3” button on the remote commander to change the adjustment color in the order of GRN →BLU →RED.
4. In GRN, BLU, or RED mode, move the joystick ▲ or ▼ to change the data in vertical direction, or ◀ or ▶ to change the data in a horizontal direction.



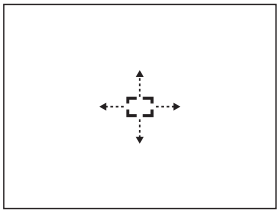
5. Before returning to the service mode, press the “MUTING” + “ENTER” buttons on the remote commander to write the data. (You must complete step 5 to write the data. If you omit step 5 the set data is returned to the data prior to the adjustment.)

3. OPERATION METHOD FOR FINE ADJUSTMENT

1. Enter the service mode and select “PJE”.
2. Select FDIS and set the data to “01” so that the data at each position can be displayed in fine adjustment mode.

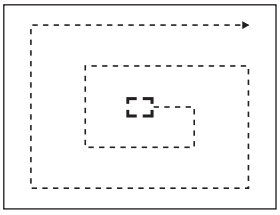
3. Press the “9” button on the remote commander and fine adjustment mode will be active where a green marker appears in the center of the screen. (In the case of GRN mode)
4. Press down on the joystick, and the marker color will be alternately switched between green (GRN mode) and white.
5. Press the “1” or “4” button on the remote commander, or use the joystick to move the marker to the position to be adjusted, where fine adjustment can be made.

* When the marker color is white:
(in this case, fine adjustment is disabled)



Use the joystick to move the marker up, down, left, or right.

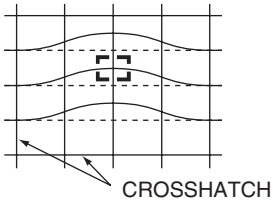
* When the marker color is green:
(GRN mode)



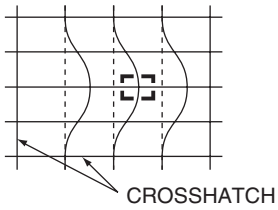
① : Moves the marker clockwise from the center to the outside.
④ : Moves the marker counter clockwise from the outside to the center.

* Fine adjustment can be made on the basis of a marker position using the joystick to move ▲ ▼ ◀ or ▶.

Move joystick ▲ direction



Move joystick ▶ direction



6. Press the “9” button on the remote commander to return to coarse adjustment mode.

2-13. PJE ADJUSTMENT (SUB DEFLECTION ADJUSTMENT)

Adjustment item	Adjustment type		
	G	R	B
	H/V*	H/V*	H/V*
CENT	O/O	O/O	O/O
SKEW	O/O	O/O	O/O
SIZE	O/O	O/O	O/O
LIN	O/O	O/O	O/O
KEY	—/O	—/O	—/O
PIN	O/O	O/O	O/O
MLIN	O/—	O/—	O/—
MSIZ	O/—	O/—	O/—

* H = Horizontal V = Vertical O = Yes — = No

Note: If the value is over the limit value, adjust these in the fine adjustment mode.

Coarse Data Limit Value:

CENT H	35 ± 170V
CENT V	20 ± 170V
SIZE H	-75 MAX
BLUE H LIN	-425 MIN
RED H LIN	425 MAX

2-13-1. ADJUSTMENT FOR NTSC FULL MODE

- The adjustment should be done in the numerical order given.

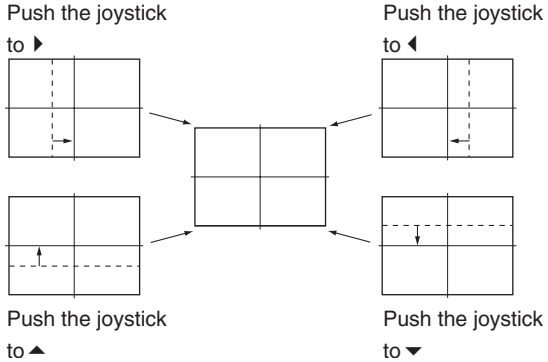
1) GREEN ADJUSTMENT

1. Cover the red and blue CRT lenses with lens caps to allow only green to show (or use the method shown in the note below for turning off the CRTs individually without using lens caps).

Note: If lens caps are unavailable, you can cut off the unnecessary color beams by controlling the service mode 2150P-2 1 RGBS.

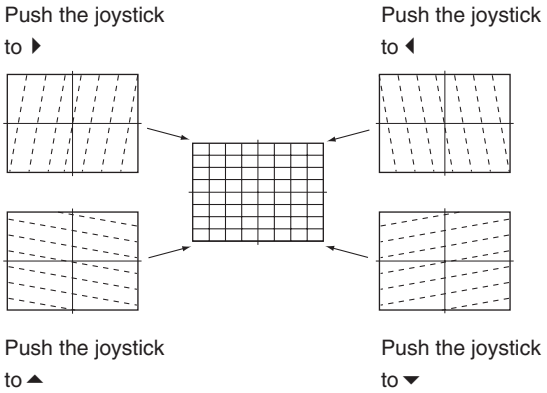
2. Enter the monoscope signal to set.
3. Select the PJE mode.
4. Press the “6” button on the remote commander to display the internal test signal (crosshatch).
5. Select “GRN CENT”, and adjust so that the pictures coincide in the center of screen.

GRN CENT (Horizontally/Vertically)



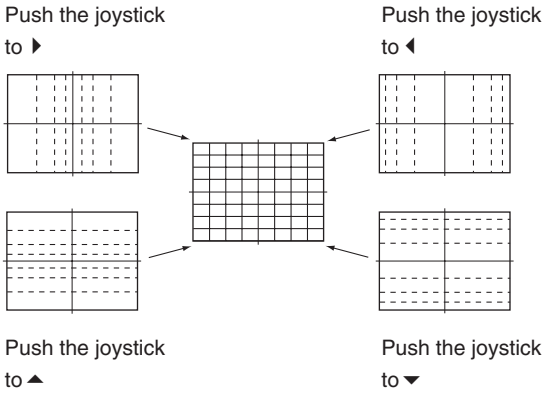
7. Select “GRN SKEW”, and correct the tilt of horizontal lines and vertical lines.

GRN SKEW (Horizontally/Vertically)



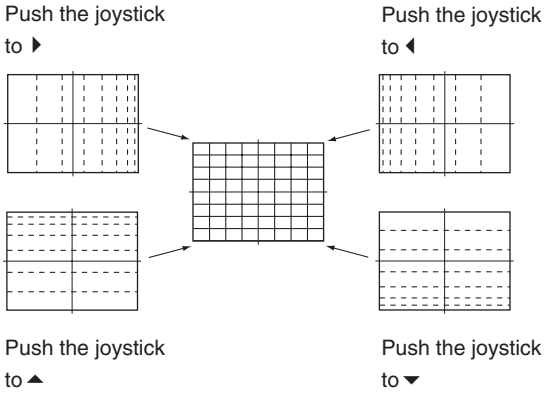
8. Select “GRN SIZE”, and adjust so that each distance from center to left end and to right end is equal. Adjust so that each distance from center to top and to bottom is equal.

GRN SIZE (Horizontally/Vertically)



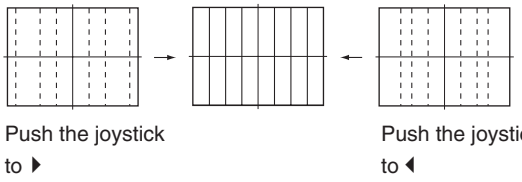
9. Select “GRN LIN”, and adjust so that each space at the right end and at the left end of screen is equal. Adjust so that each space at the top and at the bottom of screen is equal.

GRN LIN (Horizontally/Vertically)



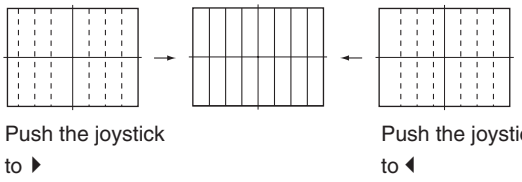
10. Select “GRN MSIZ”, and correct the space intervals for the horizontal section so the screen is equal.

GRN MSIZ (Horizontally)



11. Select “GRN MLIN”, and correct the sizes of the horizontal line so the center of the screen is symmetrical left and right.

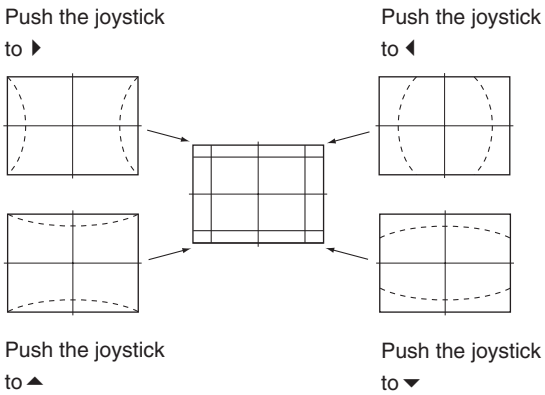
GRN MLIN (Horizontally)



Note: The SIZE and LIN, MSIZ and MLIN adjustments affect each other. If necessary, adjust these mutually.

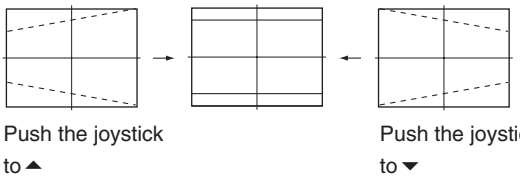
12. Select “GRN PIN”, and adjust so that right and left vertical lines on the screen become straight. Adjust so that upper and lower horizontal lines on the screen become straight.

GRN PIN (Horizontally/Vertically)



13. Select “GRN KEY”, and adjust so that upper and lower horizontal lines on the screen become parallel.

GRN KEY (Vertically)



Note: The VPIN and KEY adjustments affect each other. If necessary, adjust these mutually.

14. Press the “9” button on the remote commander to enter fine adjustment mode.

15. Make the fine adjustment so that horizontal lines and vertical lines become straight.
16. Press the “9” button on the remote commander to return to coarse adjustment mode.

2) RED ADJUSTMENT

1. Cover the blue CRT lens with a lens caps to allow only the green and red to show (or use the method shown in the note below for turning off the CRTs individually without using lens caps).
2. Press the “3” button on the remote commander to select RED mode.
3. Adjust the following items so that red lines overlap with green lines.
   - RED CENT (horizontally/vertically)
   - RED SKEW (horizontally/vertically)
   - RED SIZE (horizontally/vertically)
   - RED LIN (horizontally/vertically)
   - RED MSIZ (horizontally)
   - RED MLIN (horizontally)
   - RED PIN (horizontally/vertically)
   - RED KEY (vertically)
4. Press the “9” button on the remote commander to enter fine adjustment mode.
5. Make the fine adjustment so that horizontal lines and vertical lines overlap with green lines.
6. Press the “9” button on the remote commander to return to coarse adjustment mode.

Note: If lens caps are unavailable, you can cut off the unnecessary color beams by controlling the service mode 2150P-2 1 RGBS.

3) BLUE ADJUSTMENT

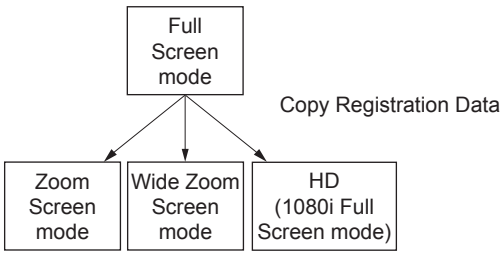
1. Remove the lens cap from the blue picture lens to display all colors.
2. Press the “3” button on the remote commander to select BLU mode.
3. Adjust the following items so that blue lines overlap with green and red lines.
   - BLU CENT (horizontally/vertically)
   - BLU SKEW (horizontally/vertically)
   - BLU SIZE (horizontally/vertically)
   - BLU LIN (horizontally/vertically)
   - BLU MSIZ (horizontally)
   - BLU MLIN (horizontally)
   - BLU PIN (horizontally/vertically)
   - BLU KEY (vertically)
4. Press the “9” button on the remote commander to enter fine adjustment mode.
5. Make the fine adjustment so that horizontal lines and vertical lines overlap with green and red lines.
6. Press the “9” button on the remote commander to return `to coarse adjustment mode.

4) REGISTRATION DATA WRITING

1. After completing each adjustment of green, blue, and red for the NTSC Full mode press the “MUTING”+ “ENTER” buttons on the remote commander to write the registration data to the NVM.

2-13-2.COPYING ALL REGISTRATION DATA TO OTHER MODES

1. Make sure that the adjustment for NTSC Full mode are complete and the data has already been written.
2. Select the PJE mode.
3. Select ALCP and set the data to “01”, and press the “MUTING”+“ENTER” buttons on the remote commander.
4. The data from the NTSC Full mode is copied to all other modes.



5. Check in the other modes and adjust as demands.
   Be sure to write data in each mode.

2-14.AUTO CONVERGENCE OFFSETS

IMPORTANT
This adjustment must be performed after registration adjustment or after readjustment for any reason!

Once registration in all modes is satisfactory, do the following:

1. Darken the room environment near the set.
2. Enter the monoscope signal to set the NTSC Full mode.
3. Select the PJE mode.
4. To automatically store the offset values, press the “FLASH FOCUS” button on the front panel of the set.
   (The offset value is now stored)
5. Select “ERR” of PJE mode.
   Confirm ERR is “00”.
   If ERR is not “00”, recheck. (Refer to section 2-15)
6. Exit the service mode.

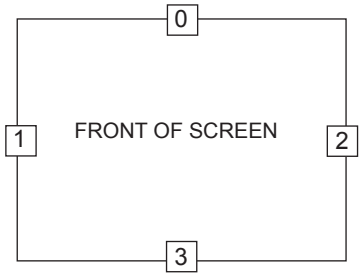
2-15.AUTO REGISTRATION ERROR CODES

If an error code is displayed after the set has been correctly adjusted, check the following items: position, tilt and sizing. If any of these adjustments are off, even slightly, the auto-registration pattern will not hit the four sensors properly. This occurs when the internal generator patterns are being flashed on the screen for the sensors to read. Therefore, auto registration (called auto convergence) cannot operate properly, causing an error code to be displayed. In order for this function to operate properly correct position, tilt, and size must be adjusted properly.

ERROR CODE LIST

ERROR CODE	DESCRIPTION	NOTE
00	No Error	
10	Sensor 0 low output	Check sensor 0, connection/wiring, circuit, and pattern position (are patterns hitting sensor?) adjust "64 VUP" if necessary.
11	Sensor 1 low output	Check sensor 1, connection/wiring, circuit, and pattern position (are patterns hitting sensor?) adjust "69 HLE" if necessary.
12	Sensor 2 low output	Check sensor 2, connection/wiring, circuit, and pattern position (are patterns hitting sensor?) adjust "73 HRIV" if necessary.
13	Sensor 3 low output	Check sensor 3, connection/wiring, circuit, and pattern position (are patterns hitting sensor?) adjust "68 VLOW" if necessary.
20	Sensor 0 high output	Check sensor 0 and circuit.
21	Sensor 1 high output	Check sensor 1 and circuit.
22	Sensor 2 high output	Check sensor 2 and circuit.
23	Sensor 3 high output	Check sensor 3 and circuit.
30	V CENT or SKEW adjustment loop overflow	Check "66 VMID" data and check registration condition.
31	H CENT or SKEW adjustment loop overflow	Check "71 HMID" data and check registration condition.
32	H LIN or SIZE adjustment loop overflow	Check "71 HMID" data and check registration condition.
40	V CENT regi data overflow	Check "66 VMID" data and confirm V CENT data (all modes) is not near 511.
41	H CENT regi data overflow	Check "71 HMID" data and confirm H CENT data (all modes) is not near 511.
42	V SKEW regi data overflow	Check "66 VMID" data and confirm V SKEW data (all modes) is not near 511.
43	H SKEW regi data overflow	Check "71 HMID" data and confirm H SKEW data (all modes) is not near 511.
44	H LIN regi data overflow	Check "71 HMID" data and confirm H CENT data (all modes) is not near 511.
45	H SIZE regi data overflow	Check "71 HMID" data and confirm H CENT data (all modes) is not near 511.
50	V CENT regi data overdrow	Check "66 VMID" data and confirm V CENT data (all modes) is not near -512.
51	H CENT regi data overdrow	Check "71 HMID" data and confirm H CENT data (all modes) is not near -512.
52	V SKEW regi data overdrow	Check "66 VMID" data and confirm V SKEW data (all modes) is not near -512.
53	H SKEW regi data overdrow	Check "71 HMID" data and confirm H SKEW data (all modes) is not near -512.
54	H LIN regi data overdrow	Check "71 HMID" data and confirm H CENT data (all modes) is not near -512.
55	H SIZE regi data overdrow	Check "71 HMID" data and confirm V CENT data (all modes) is not near -512.
60	H or V CENT offset overflow	Check "71 HMID" and "66 VMID" data and check registration condition.
61	H or V SKEW offset overflow	Check SKEW adjustment.
62	H SIZE or LIN offset overflow	Check "71 HMID" data, check "66 VMID" data, and check SIZE and LIN adjustment.
70	H or V CENT offset overdrow	Check "71" HMID" data and check "66 VMID" data.
71	H or V SKEW offset overdrow	Check SKEW adjustment.
72	H SIZE or LIN offset overdrow	Check "69 HLB" data, check "73 HRIV" data, and check SIZE and LIN adjustment.
80	SIZE Limit Error	Check that H SIZE data is negative and not near zero.

SENSOR POSITIONS

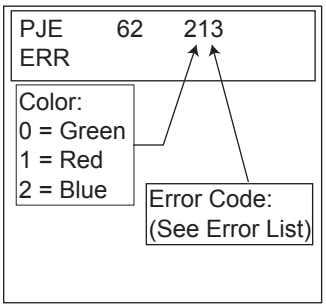


0: UPPER SENSOR
1: LEFT SENSOR
2: RIGHT SENSOR
3: LOWER SENSOR

• ERROR CODE SCREEN DISPLAY

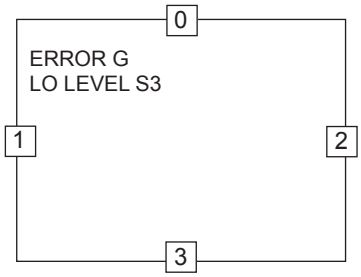
Error codes in normal (customer) mode are not displayed. You must enter PJED service mode to see the error code.

AUTO REGI ERROR CODE FORMAT
ERROR EXAMPLE



Example Blue Low Level Sensor 3
0 = Green
1 = Red
2 = Blue

When executing flash focus in service mode, the error will be displayed in text format.



SECTION 3: SAFETY-RELATED ADJUSTMENTS

D BOARD

3-1. HV REGULATION CIRCUIT CHECK AND ADJUSTMENT

When replacing the following components marked with a ◪ on the schematic diagram always check the HV regulation, and if necessary re-adjust.

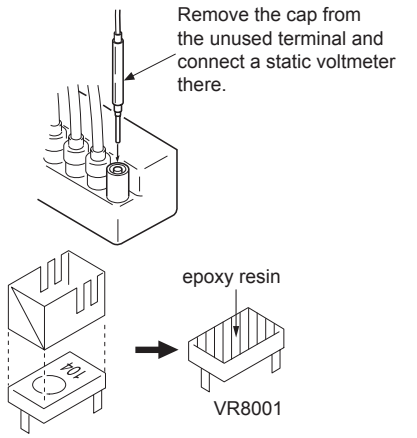
Part Replaced (◪)	Adjustment (⋈)
A BOARD: C8079, C8083, C8090, C8129, D8013, D8015, D8038, D8043, IC8006, Q8021, R8055, R8099, R8102, R8128, R8129, R8131, R8139, R8140, R8142, R8153, R8163, R8223, R8230, T8004 (LOT), T8005 (FBT), HV Block, D Board	**HV REGULATOR** VR8001

OPERATION CHECK

1. Receive the all white signal.
2. Set PIC MAX/BRT CENT.
3. Confirm that the voltage between CN8015 ① PIN and GND is less than 7.80VDC.

HV REGULATION ADJUSTMENT

1. Connect a HV static voltmeter to the unconnected plug of the high-voltage block.
2. Power on the set.
3. Receive the all white signal.
4. Set PIC MAX/BRT CENT.
5. Confirm that the static voltmeter reading is 31.0 ± 0.4V.
   If not, adjust with VR8001 to the specified value.
6. After adjustment, put the VR cover on VR8001 (as shown below) and apply sufficient amount of epoxy resin around VR8001.



3-2. HV HOLD DOWN CIRCUIT OPERATION CHECK AND ADJUSTMENT

When replacing the following components marked with a ◪ on the schematic diagram always check the hold-down voltage and re-adjust when necessary.

Part Replaced (◪)	Adjustment (⋈)
A BOARD: C8054, C8086, C8088, C8100, C8104, C8118, C8123, C8124, D8019, D8020, D8022, D8028, D8036, FB8001, IC8008, Q8035, Q8038, R8035, R8043, R8159, R8166, R8171, R8196, R8201, T8004 (LOT), T8005 (FBT), HV Block, D Board	**HV HOLD DOWN** VR8002

OPERATION CHECK

1. Receive the dot signal.
2. Set PIC MIN/BRT MIN.
3. Confirm that the voltage between cathode of D8038 (JW171) and GND is more than 23.0V DC.
4. Using an external DC Power supply, apply the voltage shown below between cathode of D8038 (JW171) on “D” and GND, then confirm that the HV-Prot circuit works. (Raster disappears)
   Apply DC voltage: Less than 29.05V DC.

HV HOLD-DOWN ADJUSTMENT

1. Connect a HV static voltmeter to the unconnected plug of the high-voltage block.
2. Power on the set.
3. Connect an external 10kΩ VR at CN8015 and adjust this VR so that the high voltage is 34.50kV.
4. Adjust VR8002 to the point that the HV-Prot circuit works (Raster disappears) at 34.50 ± 0.50kV reading on the static voltmeter.
5. After adjustment, put the VR cover on VR8002 and apply sufficient amount of epoxy resin around VR8002 as the same manner for VR8001.

G BOARD

3-3. +B MAX VOLTAGE CONFIRMATION

The following adjustments should always be performed when replacing IC501, R5032.

1. Supply 130VAC to variable autotransformer.
2. Receive dot signal pattern and set the PICTURE and BRIGHTNESS settings to their minimum.
3. Confirm the voltage of TP +B 135V is less than 137.0Vdc.
4. If step 3 is not satisfied, replace IC501 and repeat steps 1-3.

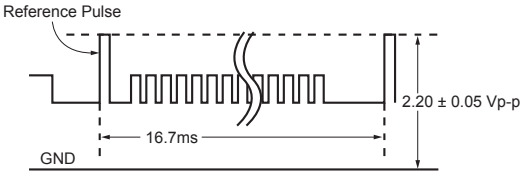
3-4. +B OVP CONFIRMATION

1. Add to low voltage power supply between to TP5001 and ground.
2. Supply 120VAC to variable autotransformer.
3. Power on the Set and receive dot signal pattern.
4. Set the PICTURE and BRIGHTNESS settings.
5. Check the OVP is activated.
   Operate :less than 2.50V

SECTION 4: CIRCUIT ADJUSTMENTS

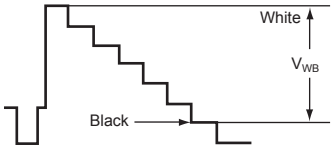
4-1. BLUE OFFSET ADJUSTMENT

1. Receive the all black (1080i, component) signal with VIDEO 5 input, and set PICTURE to maximum.
2. Connect an oscilloscope between CN5 ⑦ pin (B) on the (A board) and ground.
3. Set in the service mode and select the category “2150D-2”.
4. Adjust “SLIN” so that the waveform level is 2.20 ± 0.05Vpp.
5. After completing the adjustments, write the data into memory by pressing “MUTING” → “ENTER” on the remote commander.
6. Receive the RF signal and change the wide screen mode to “Wide Zoom”. Copy the same data to “SLIN”.



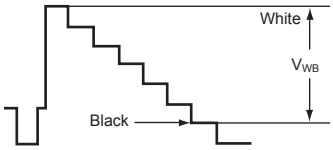
4-2. P &P SUB CONTRAST ADJUSTMENT (VIDEO) (SCON)

1. Receive the signal.
   TV terminal (sub) : Color-bar (white-75%, 7.5% setup)
   VIDEO terminal (main) : Color-bar (white-75%, 7.5% setup)
2. VIDEO MODE : Pro
   PICTURE : Maximum
   COLOR : Minimum
   2150P-2 1 RGBS : 2
3. Set to P & P mode, and set to service mode.
4. Connect an oscilloscope between the check point and ground.
   Check points : CN5 pin ⑥
   A Board : CN5 pin ⑥
5. Select “2103-1-02” (Main scon), and adjust so that the waveform level of V_{WB} is 1.55 ± 0.04Vp-p.
6. Select “2103-2-02” (Sub scon), and adjust so that the waveform level of V_{WB} is 1.55 ± 0.04Vp-p.
7. After completing the adjustments, write the data into memory by pressing “MUTING” → “ENTER” on the remote commander.



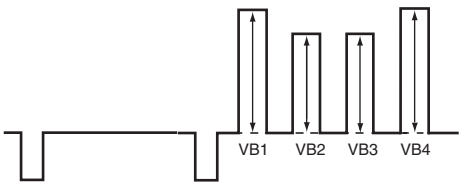
4-3. P & P SUB CONTRAST ADJUSTMENT (RF) (SCON)

1. Receive the signal.
   TV terminal (sub) : Color-bar (white-75%, 7.5% setup)
   VIDEO terminal (main) : Color-bar (white-75%, 7.5% setup)
2. VIDEO MODE : Pro
   PICTURE : Maximum
   COLOR : Minimum
   2150P-2 1 RGBS : 2
3. Set to P & P mode, and set to service mode.
4. Connect an oscilloscope between the check point and ground.
   Check points : CN5 ⑥
   A Board : CN5 ⑥
5. Select “2103-1-02” (Main scon), and adjust so that the waveform level of V_{WB} is 1.55 ± 0.04Vp-p.
6. Select “2103-2-02” (Sub scon), and adjust so that the waveform level of V_{WB} is 1.55 ± 0.04Vp-p.
7. After completing the adjustments, write the data into memory by pressing “MUTING” → “ENTER” on the remote commander.



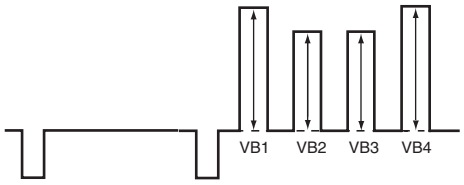
4-4. P & P SUB-HUE AND SUB-COLOR ADJUSTMENT (VIDEO) (SHUE, SCOL)

1. Receive the signal.
   TV terminal (sub) : Color-bar (white-75%, 7.5% setup)
   VIDEO terminal (main) : Color-bar (white-75%, 7.5% setup)
2. VIDEO MODE : Pro
   PICTURE : Maximum
   COLOR : Center
   2150P-2 1 RGBS : 7
3. Set to P & P mode, and set to service mode.
4. Connect an oscilloscope between pin ⑦ of CN5 (A board) connector and ground.
5. Select “2103-1-03 SCOL, -04 SHUE” (Main), and adjust them to have VB1 ≤ VB4 and VB2 ≤ VB3 in the waveform levels.
6. Select “2103-2-03 SCOL, -04 SHUE” (Sub), and adjust them to have VB1 ≤ VB4 and VB2 ≤ VB3 in the waveform levels.
7. After completing the adjustments, write the data into memory by pressing “MUTING” → “ENTER” on the remote commander.



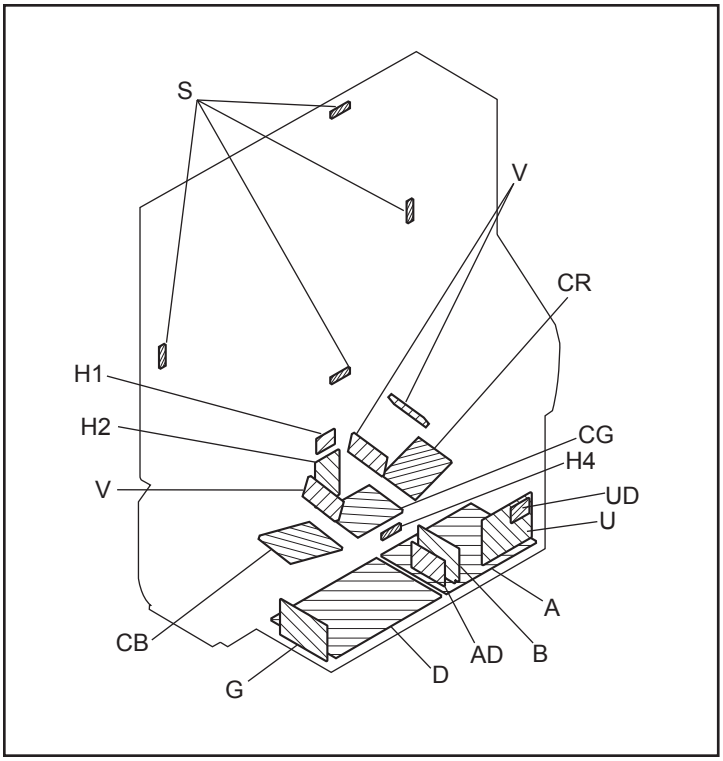
4-5. P & P SUB-HUE AND SUB-COLOR ADJUSTMENT (RF) (SHUE, SCOL)

1. Receive the signal.
   TV terminal (main) : Color-bar (white-75%, 7.5% setup)
   VIDEO terminal (sub) : Color-bar (white-75%, 7.5% setup)
2. VIDEO MODE : Pro
   PICTURE : Maximum
   COLOR : Center
   2150P-2 1 RGBS : 7
3. Set to P & P mode, and set to service mode.
4. Connect an oscilloscope between pin ⑦ of CN5 (A board) connector and ground.
5. Select “2103-1-03 SCOL, -04 SHUE” (Main), and adjust them to have VB1 ≤ VB4 and VB2 ≤ VB3 in the waveform levels.
6. Select “2103-2-03 SCOL, -04 SHUE” (Sub), and adjust them to have VB1 ≤ VB4 and VB2 ≤ VB3 in the waveform levels.
7. After completing the adjustments, write the data into memory by pressing “MUTING” → “ENTER” on the remote commander.



SECTION 5: DIAGRAMS

5-1. CIRCUIT BOARDS LOCATION



5-2. PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS INFORMATION

All capacitors are in µF unless otherwise noted. pF : µµF 50WV or less are not indicated except for electrolytics and tantalums.

All electrolytics are in 50V unless otherwise specified.

All resistors are in ohms. K=1000, M=1000k

Indication of resistance, which does not have one for rating electrical power, is as follows: Pitch : 5mm
Rating electrical power : $^1/_4$ W

$^1/_4$ W in resistance, $^1/_{10}$ W and $^1/_8$ W in chip resistance.

: nonflammable resistor.

: fusible resistor.

: internal component.

: panel designation and adjustment for repair.

: earth ground

: earth-chassis

All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

Readings are taken with a NTSC color-bar signal input.

Readings are taken with a 10M digital multimeter.

Voltages are DC with respect to ground unless otherwise noted.

Voltage variations may be noted due to normal production tolerances.

All voltages are in V.

S : Measurement impossibillity.

: B+ line

: B-line. (Actual measured value may be different).

: signal path. (RF)

Circled numbers are waveform references.

The components identified by ⋈ in this basic schematic diagram have been carefully factory-selected for each set in order to satisfy regulations regarding X-ray radiation. Should replacement be necessary, replace only with the value originally used.

When replacing components identified by ◪, make the necessary adjustments as indicated. If the results do not meet the specified value, change the component identified by ⋈ and repeat the adjustment until the specified value is achieved.

(Refer to Safety-Related Adjustments in Sections 3-1 and 3-2.)

When replacing the parts listed in the table below, it is important to perform the related adjustments.

Part Replaced (◪)	Adjustment (⋈)
A BOARD: C8079, C8083, C8090, C8129, D8013, D8015, D8038, D8043, IC8006, Q8021, R8055, R8099, R8102, R8128, R8129, R8131, R8139, R8140, R8142, R8153, R8163, R8223, R8230, T8004 (LOT), T8005 (FBT), HV Block, D Board	**HV REGULATOR** VR8001
A BOARD: C8054, C8086, C8088, C8100, C8104, C8118, C8123, C8124, D8019, D8020, D8022, D8028, D8036, FB8001, IC8008, Q8035, Q8038, R8035, R8043, R8159, R8166, R8171, R8196, R8201, T8004 (LOT), T8005 (FBT), HV Block, D Board	**HV HOLD DOWN** VR8002

REFERENCE INFORMATION

RESISTOR	: RN	METAL FILM
	: RC	SOLID
	: FPRD	NONFLAMMABLE CARBON
	: FUSE	NONFLAMMABLE FUSIBLE
	: RW	NONFLAMMABLE WIREWOUND
	: RS	NONFLAMMABLE METAL OXIDE
	: RB	NONFLAMMABLE CEMENT
	: ※	ADJUSTMENT RESISTOR
COIL	: LF-8L	MICRO INDUCTOR
CAPACITOR	: TA	TANTALUM
	: PS	STYROL
	: PP	POLYPROPYLENE
	: PT	MYLAR
	: MPS	METALIZED POLYESTER
	: MPP	METALIZED POLYPROPYLENE
	: ALB	BIPOLAR
	: ALT	HIGH TEMPERATURE
	: ALR	HIGH RIPPLE

The components identified by shading and ⚠ symbol are critical for safety. Replace only with part number specified.

The symbol ▬▭▬ indicates a fast operating fuse and is displayed on the component side of the board. Replace only with fuse of the same rating as marked.

Les composants identifies per un trame et une marque ⚠ sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

Le symbole ▬▭▬ indique une fusible a action rapide. Doit etre remplace par une fusible de meme yaleur, comme maque.

Terminal name of semiconductors in silk screen printed circuit (*)

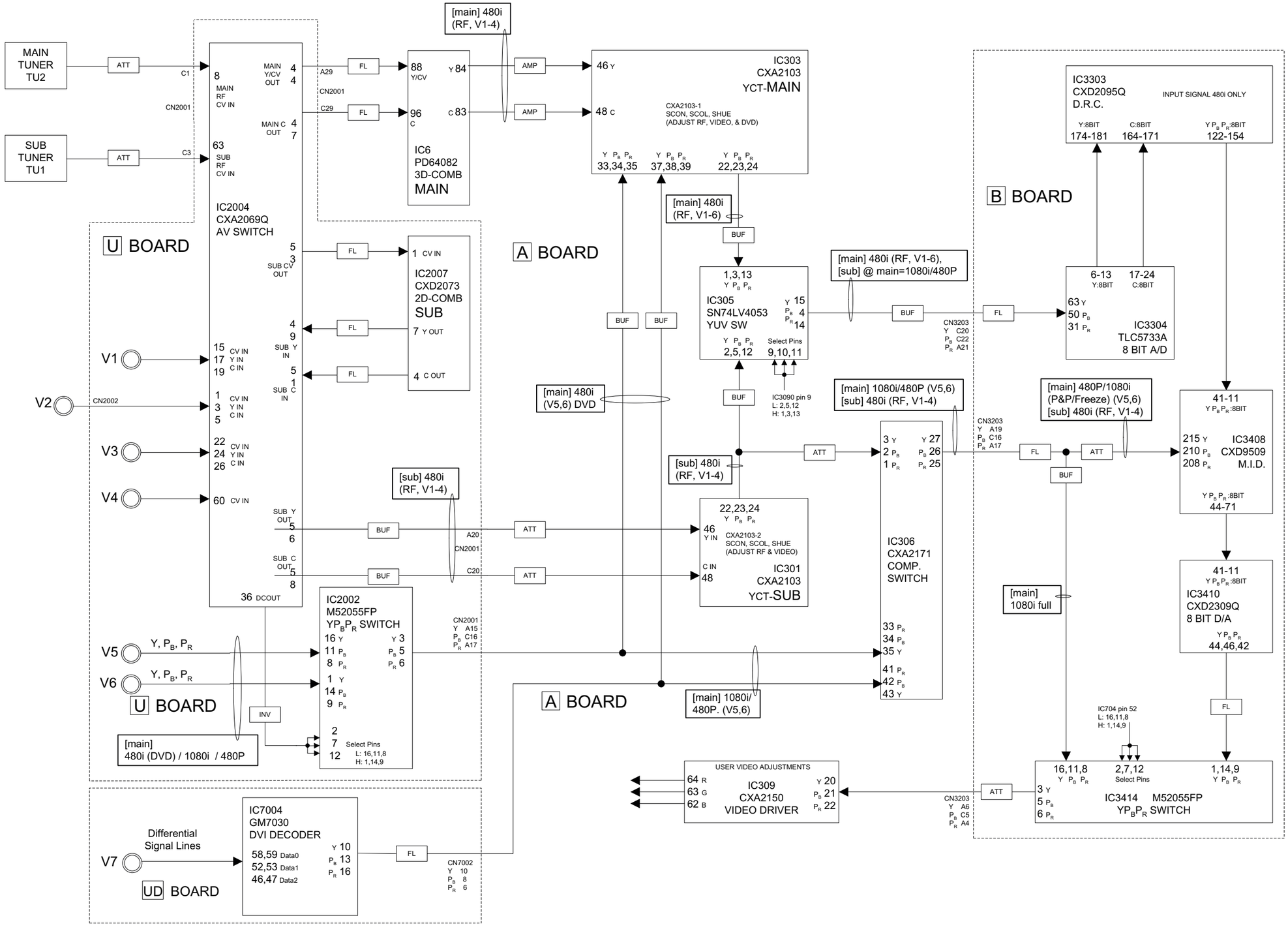
	Device	Printed symbol	Terminal name	Circuit
①	Transistor		Collector Base Emitter	
②	Transistor		Collector Base Emitter	
③	Diode		Cathode Anode	
④	Diode		Cathode Anode (NC)	
⑤	Diode		Cathode Anode (NC)	
⑥	Diode		Common Anode Cathode	
⑦	Diode		Common Anode Cathode	
⑧	Diode		Common Anode Anode	
⑨	Diode		Common Anode Anode	
⑩	Diode		Common Cathode Cathode	
⑪	Diode		Common Cathode Cathode	
⑫	Diode		Anode Cathode Anode Anode Cathode Anode	
⑬	Transistor (FET)		Drain Source Gate	
⑭	Transistor (FET)		Drain Source Gate	
⑮	Transistor (FET)		□ Source □ Drain □ Gate	
⑯	Transistor		□ Emitter □ Collector □ Base	
⑰	Transistor		C2 B1 E1 E2 B2 C1	
⑱	Transistor		C1 B2 E2 E1 B1 C2	
⑲	Transistor		C1 B2 E2 E1 B1 C2	
⑳	Transistor		C1 B2 E2 E1 B1 C2	
㉑	Transistor		E2 B1 E1 C2 C1(B2)	
㉒	Transistor		(B2) B1 E1 E2 C1 C2	
㉓	Transistor		(B2) E2 E1 B1 C2 C1	
-	Discrete semiconductor			

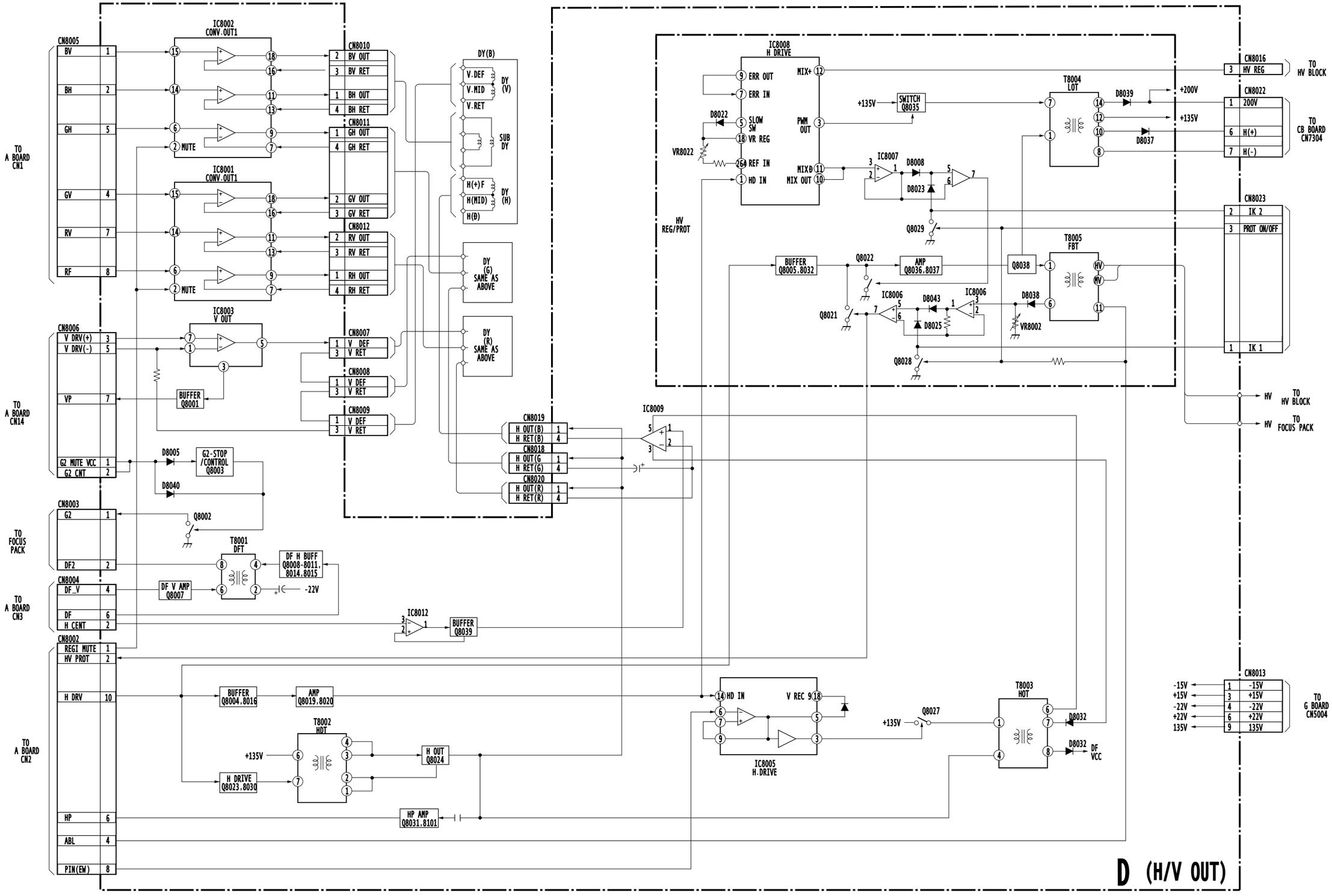
(Chip semiconductors that are not actually used are included.)

Ver.1.6

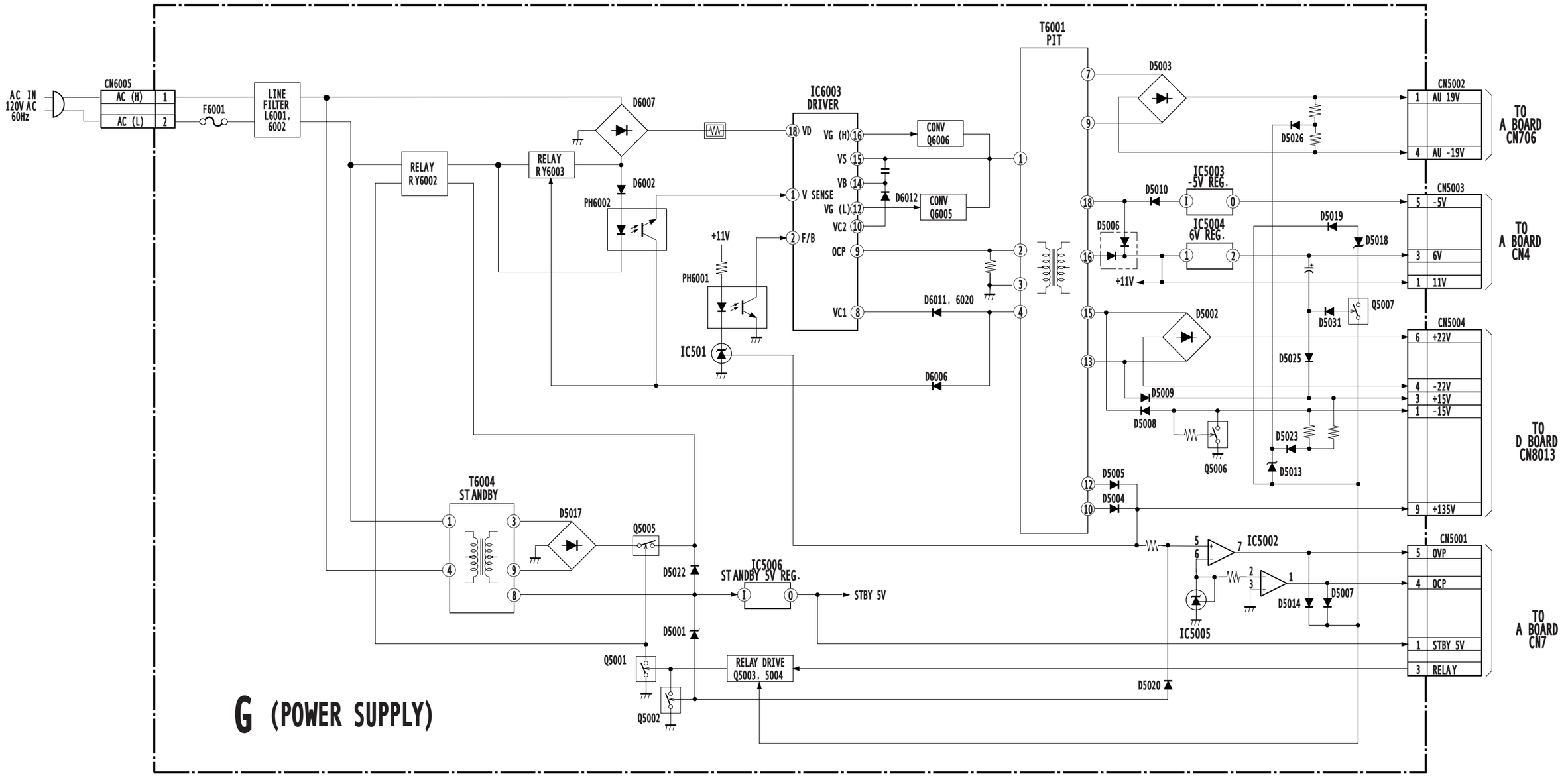
5-3. BLOCK DIAGRAMS

BLOCK DIAGRAM (1 OF 3)



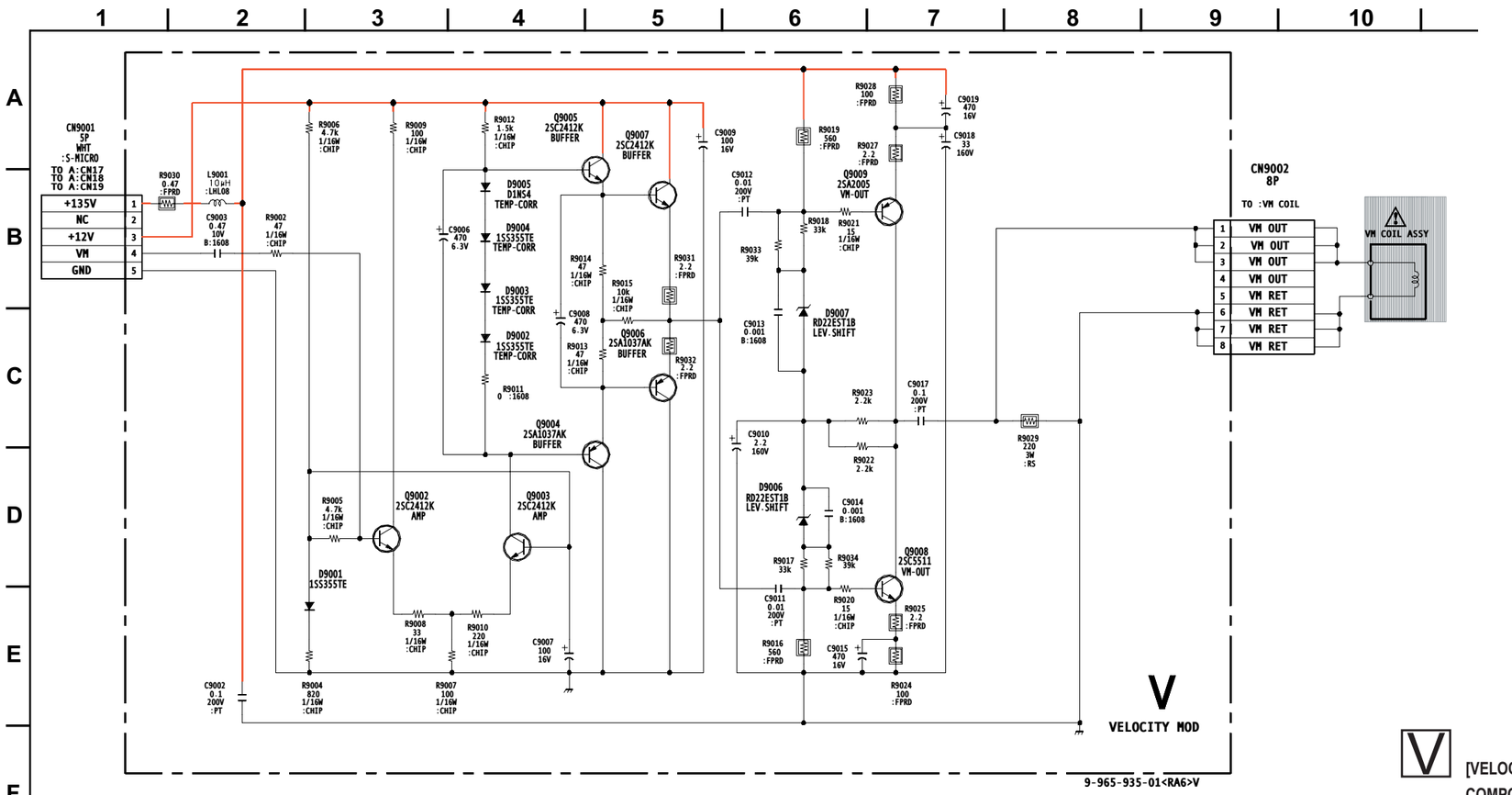

TO A BOARD CN1
CN8005
BV 1
BH 2
GH 5
GV 4
RV 7
RF 8
MUTE
IC8002 CONV.OUT1
IC8001 CONV.OUT1
CN8010
2 BV OUT
3 BV RET
1 BH OUT
4 BH RET
CN8011
1 GH OUT
4 GH RET
2 GV OUT
3 GV RET
CN8012
2 RV OUT
3 RV RET
1 RH OUT
4 RH RET
DY(B)
V.DEF
V.MID
V.RET
DY (V)
SUB DY
H(+)F
H(MID)
H(D)
DY (H)
DY (G) SAME AS ABOVE
DY (R) SAME AS ABOVE
TO A BOARD CN14
CN8006
V DRV(+) 3
V DRV(-) 5
VP 7
G2 MUTE VCC 1
G2 CNT 2
IC8003 V OUT
BUFFER Q8001
CN8007
1 V DEF
3 V RET
CN8008
1 V DEF
3 V RET
CN8009
1 V DEF
3 V RET
D8005
D8040
G2-STOP /CONTROL Q8003
Q8002
TO FOCUS PACK
CN8003
G2 1
DF2 2
T8001 DFT
DF H BUFF Q8008-8011, 8014.8015
DF V AMP Q8007
-22V
TO A BOARD CN3
CN8004
DF_V 4
DF 6
H CENT 2
IC8012
BUFFER Q8039
CN8002
REGI MUTE 1
HV PROT 2
H DRV 10
BUFFER Q8004.8016
AMP Q8019.8020
T8002 HDT
+135V
H DRIVE Q8023.8030
H OUT Q8024
HP AMP Q8031.8101
TO A BOARD CN2
HP 6
ABL 4
PIN(EW) 8
CN8019
H OUT(B) 1
H RET(B) 4
CN8018
H OUT(G 1
H RET(G) 4
CN8020
H OUT(R) 1
H RET(R) 4
IC8009
HV REG/PROT
IC8008 H DRIVE
ERR OUT
ERR IN
SLOW SW
VR REG
REF IN
HD IN
MIX+
PWM OUT
MIX- MIX OUT
VR8022
D8022
+135V
SWITCH Q8035
T8004 LOT
D8039
D8037
+200V
+135V
IC8007
D8008
D8023
Q8029
BUFFER Q8005.8032
Q8022
AMP Q8036.8037
Q8038
T8005 FBT
IC8006
D8043
D8025
D8038
VR8002
Q8021
Q8028
CN8016
3 HV REG
TO HV BLOCK
CN8022
1 200V
6 H(+)
7 H(-)
TO CB BOARD CN7304
CN8023
2 IK 2
3 PROT ON/OFF
1 IK 1
HV TO HV BLOCK
HV TO FOCUS PACK
IC8005 H.DRIVE
V REC
Q8027
T8003 HOT
D8032
DF VCC
CN8013
-15V 1 -15V
+15V 3 +15V
-22V 4 -22V
+22V 6 +22V
135V 9 135V
TO G BOARD CN5004
D (H/V OUT)

BLOCK DIAGRAM (3 OF 3)

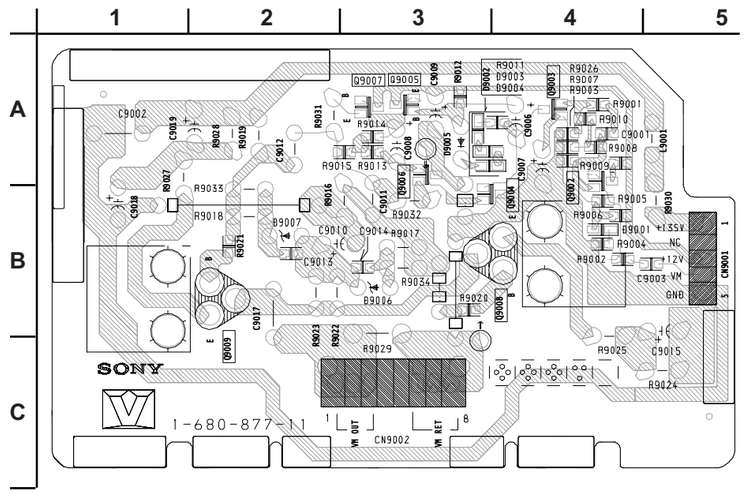


5-4. SCHEMATICS AND SUPPORTING INFORMATION

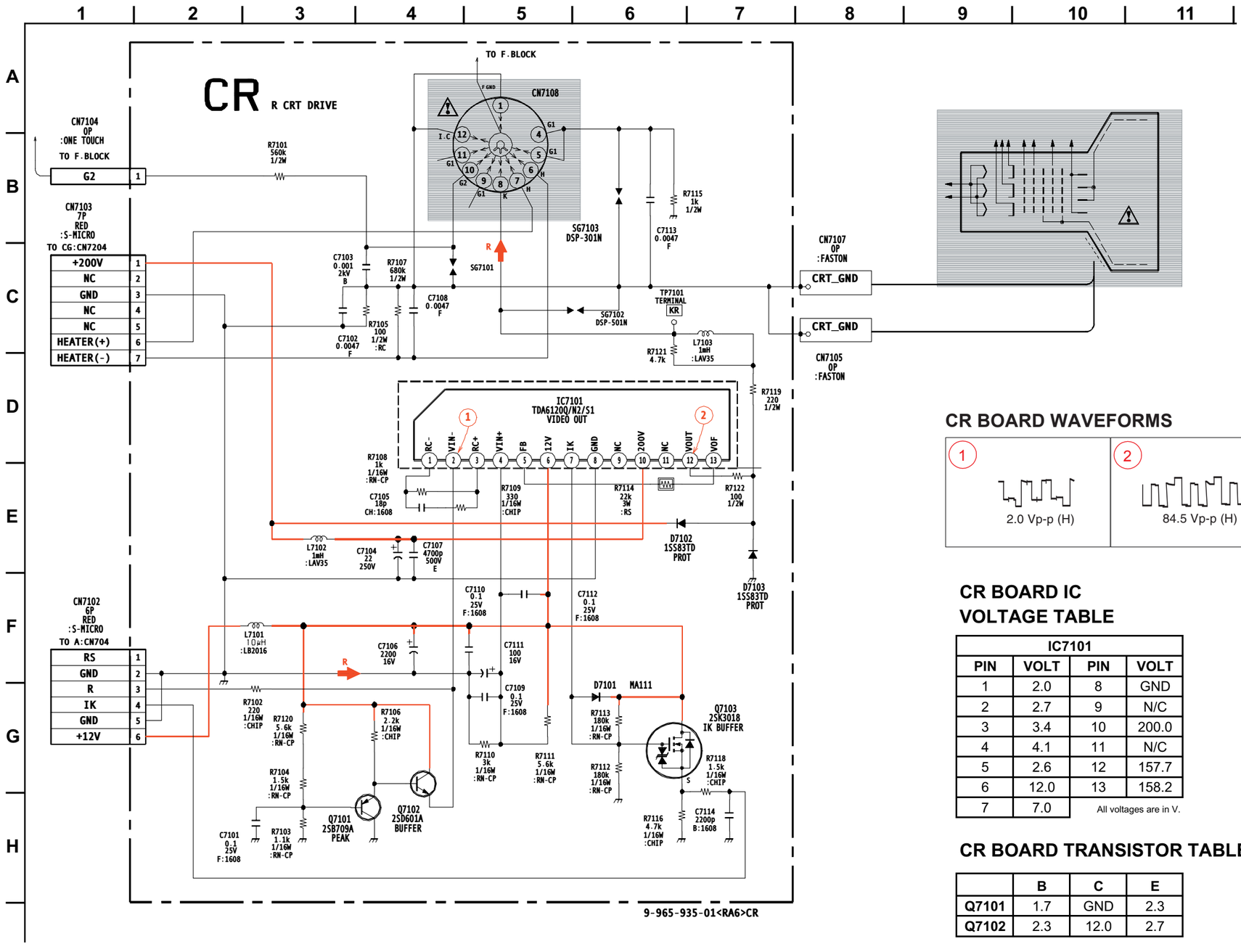
V BOARD SCHEMATIC DIAGRAM



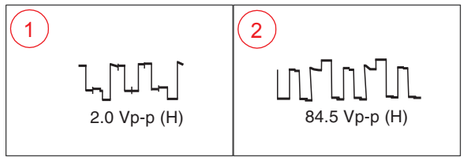
[V] [VELOCITY MOD]
COMPONENT SIDE



CR BOARD SCHEMATIC DIAGRAM



CR BOARD WAVEFORMS



CR BOARD IC VOLTAGE TABLE

IC7101			
PIN	VOLT	PIN	VOLT
1	2.0	8	GND
2	2.7	9	N/C
3	3.4	10	200.0
4	4.1	11	N/C
5	2.6	12	157.7
6	12.0	13	158.2
7	7.0		

All voltages are in V.

CR BOARD TRANSISTOR TABLE

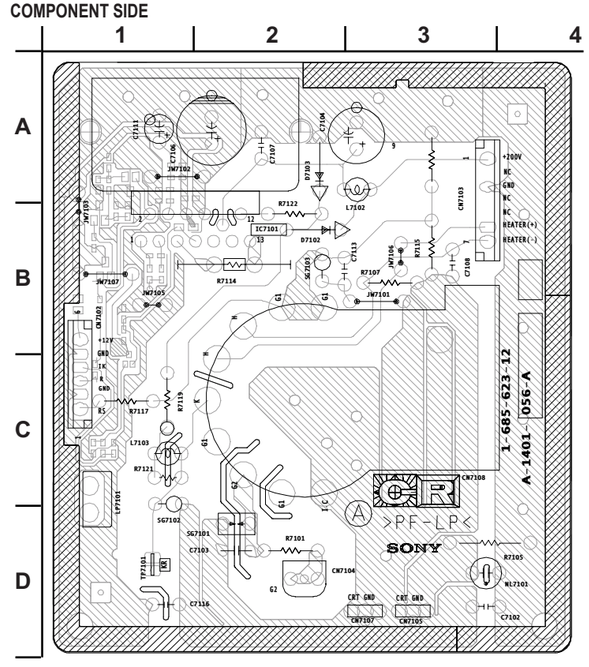
	B	C	E
Q7101	1.7	GND	2.3
Q7102	2.3	12.0	2.7

	G	D	S
Q7103	7.0	12.0	5.7

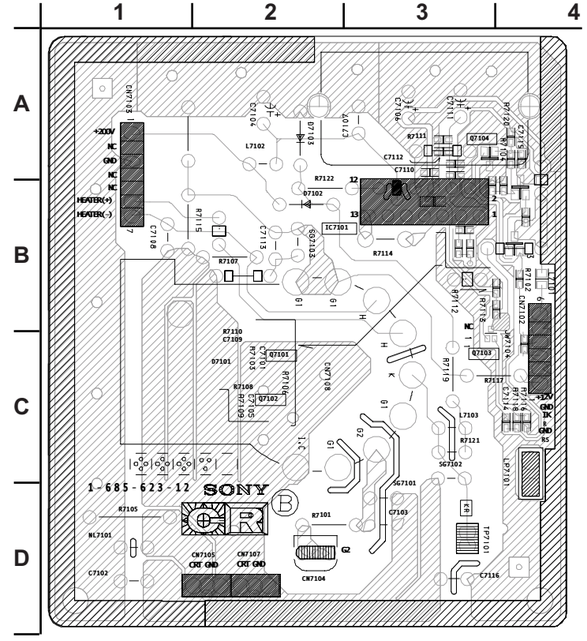
All voltages are in V.

CR [R CRT DRIVE]

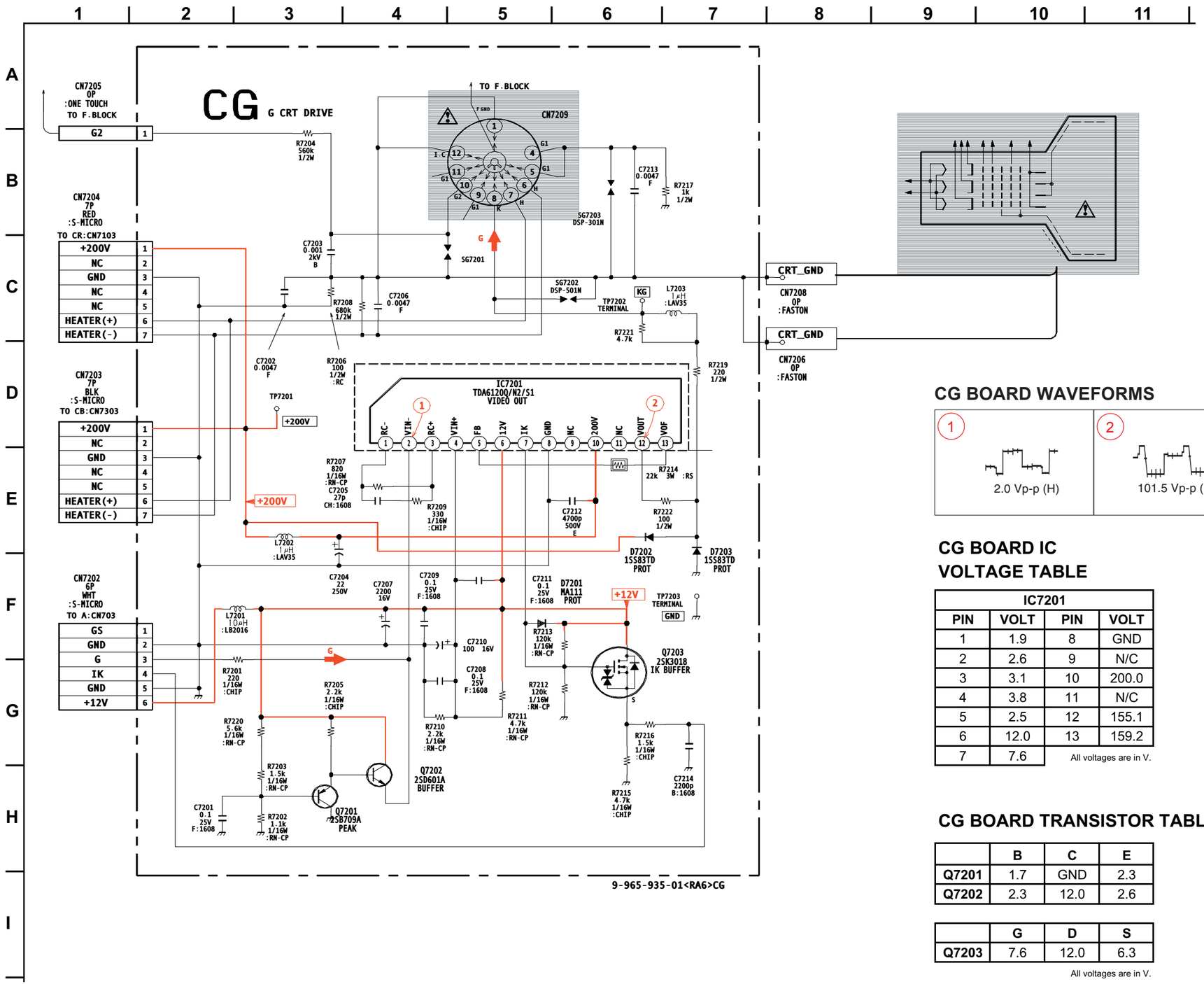
COMPONENT SIDE



CONDUCTOR SIDE



CG BOARD SCHEMATIC DIAGRAM



CG BOARD WAVEFORMS

1	2
2.0 Vp-p (H)	101.5 Vp-p (H)

CG BOARD IC VOLTAGE TABLE

IC7201			
PIN	VOLT	PIN	VOLT
1	1.9	8	GND
2	2.6	9	N/C
3	3.1	10	200.0
4	3.8	11	N/C
5	2.5	12	155.1
6	12.0	13	159.2
7	7.6		

All voltages are in V.

CG BOARD TRANSISTOR TABLE

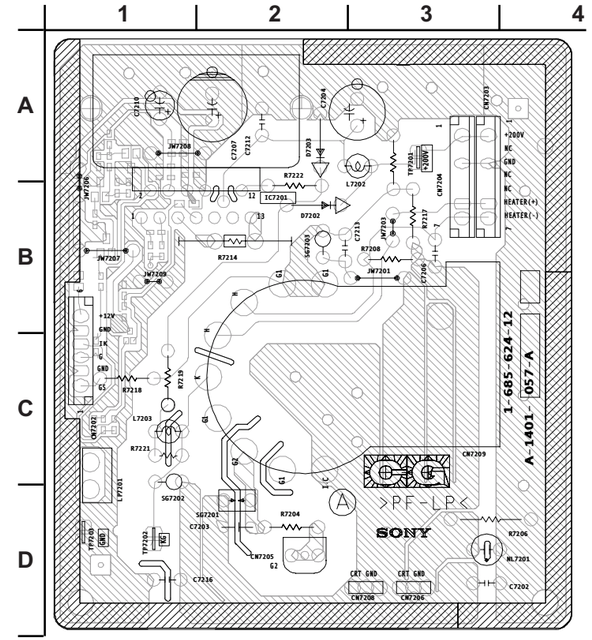
	B	C	E
Q7201	1.7	GND	2.3
Q7202	2.3	12.0	2.6

	G	D	S
Q7203	7.6	12.0	6.3

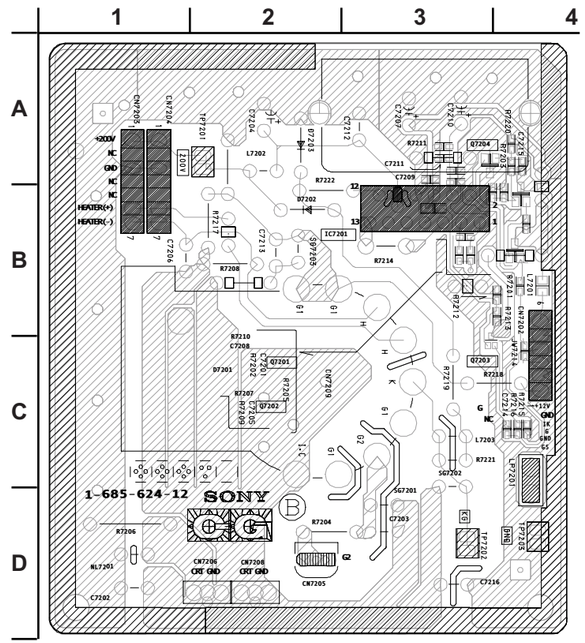
All voltages are in V.

CG [G CRT DRIVE]

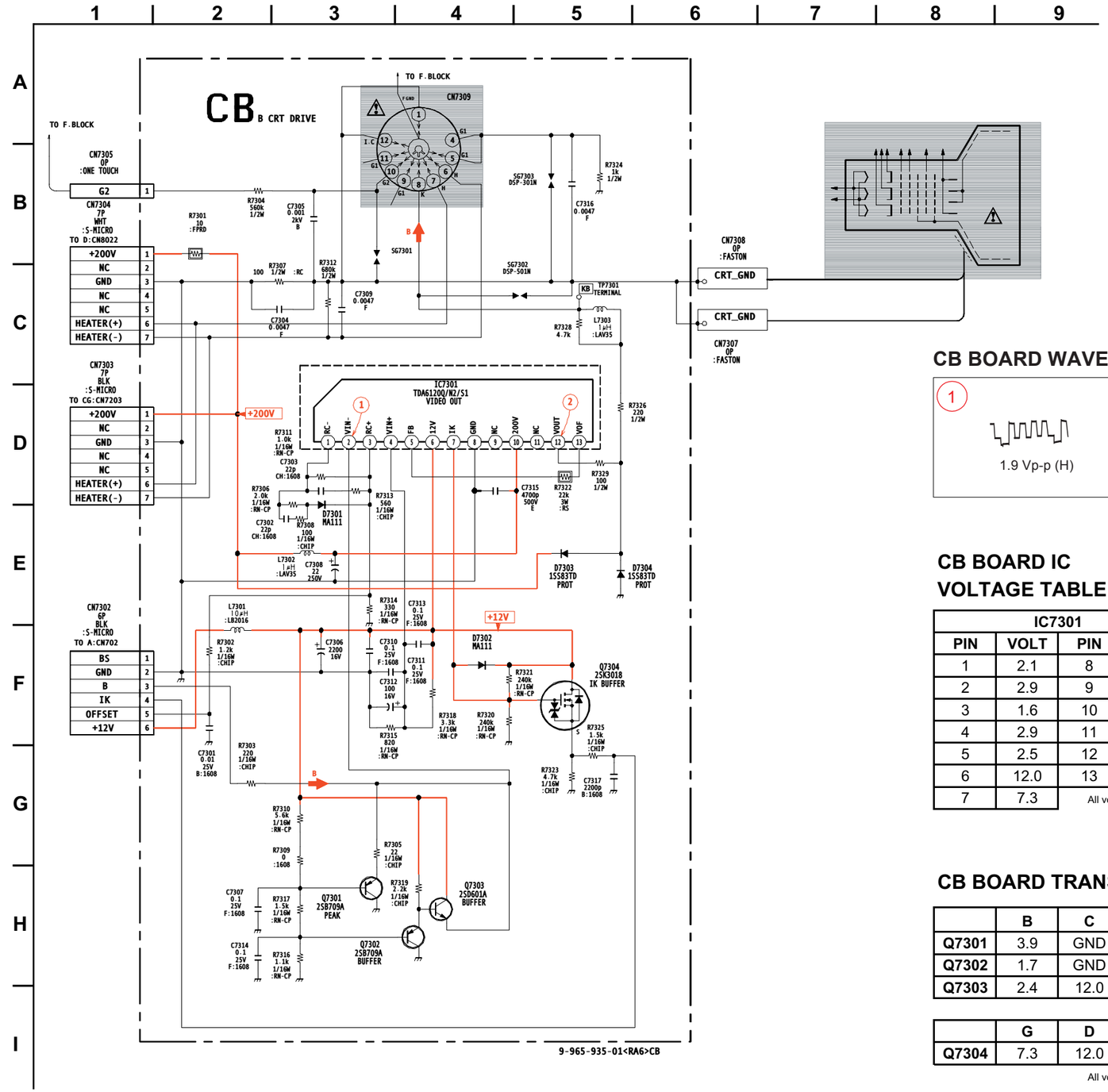
COMPONENT SIDE



CONDUCTOR SIDE



CB BOARD SCHEMATIC DIAGRAM



CB BOARD WAVEFORMS

1	2
1.9 Vp-p (H)	94.0 Vp-p (H)

CB BOARD IC VOLTAGE TABLE

IC7301			
PIN	VOLT	PIN	VOLT
1	2.1	8	GND
2	2.9	9	N/C
3	1.6	10	200.0
4	2.9	11	N/C
5	2.5	12	161.8
6	12.0	13	144.5
7	7.3		

All voltages are in V.

CB BOARD TRANSISTOR TABLE

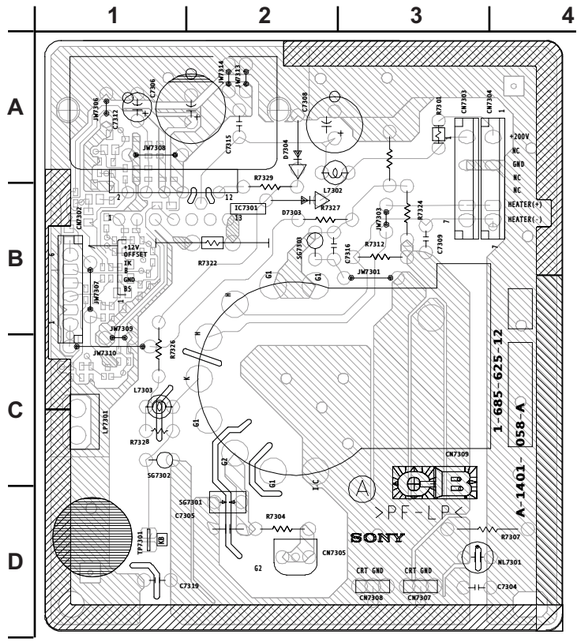
	B	C	E
Q7301	3.9	GND	3.0
Q7302	1.7	GND	2.4
Q7303	2.4	12.0	2.9

	G	D	S
Q7304	7.3	12.0	6.0

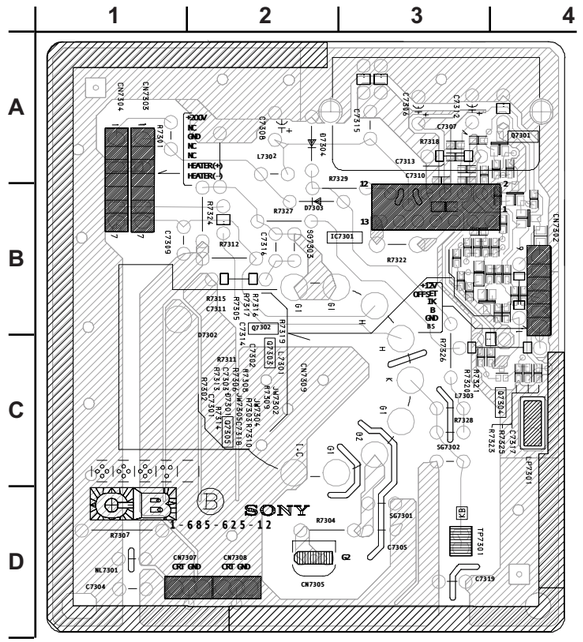
All voltages are in V.

CB [B CRT DRIVE]

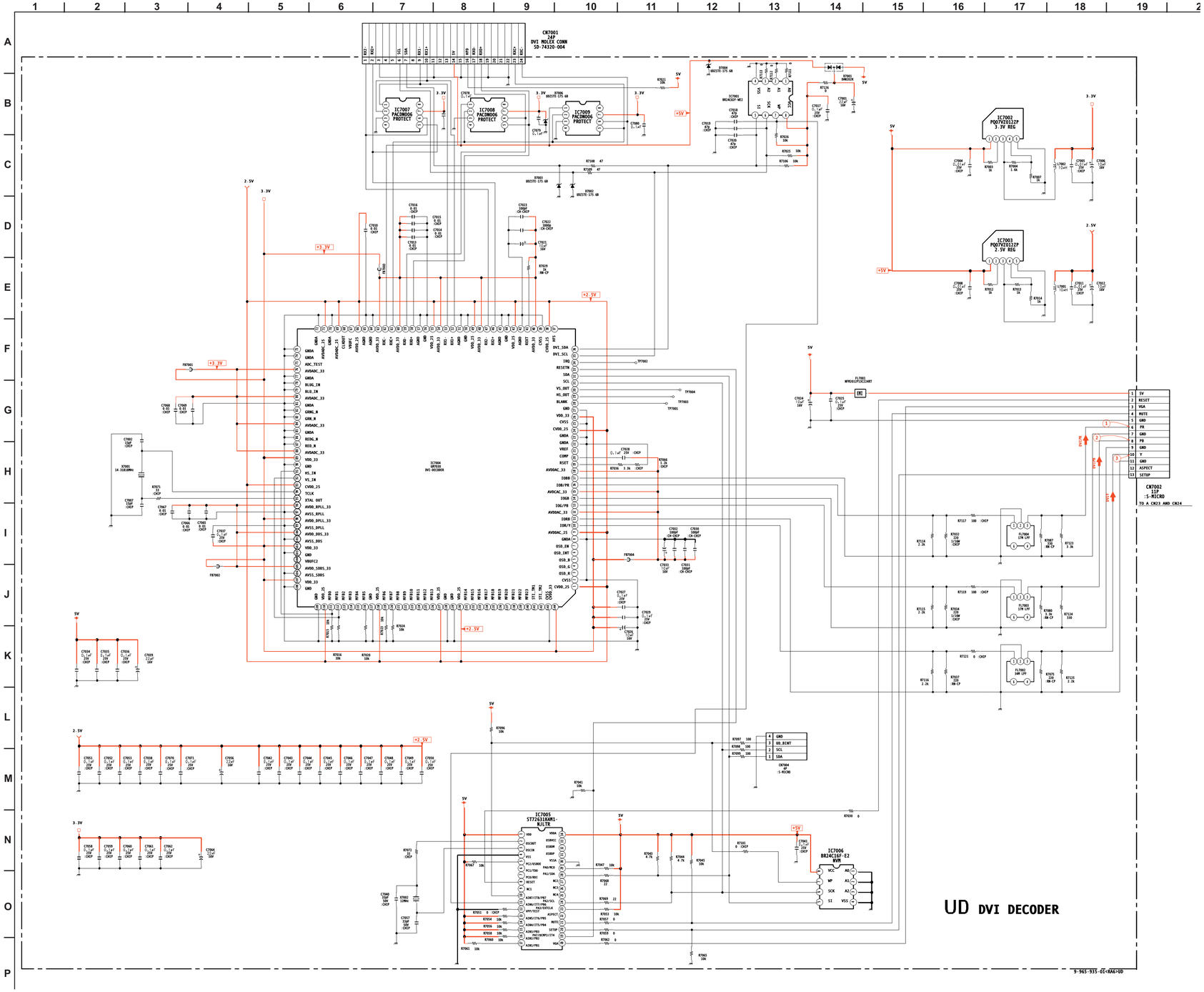
COMPONENT SIDE



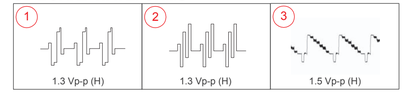
CONDUCTOR SIDE



UD BOARD SCHEMATIC DIAGRAM The UD board is not field repairable. If service is required, use the following part number to order a complete replacement board.
A-1300-324-A UD Board, Complete

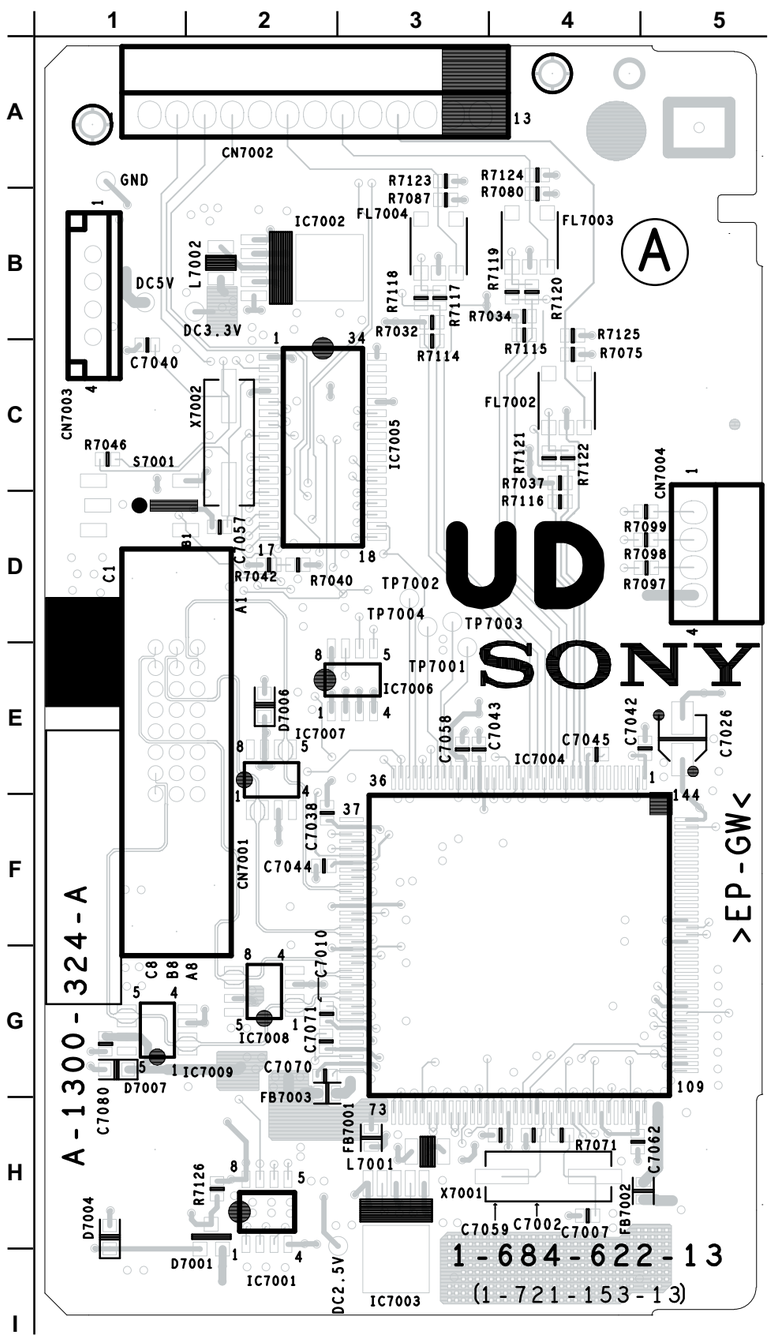


UD BOARD WAVEFORMS

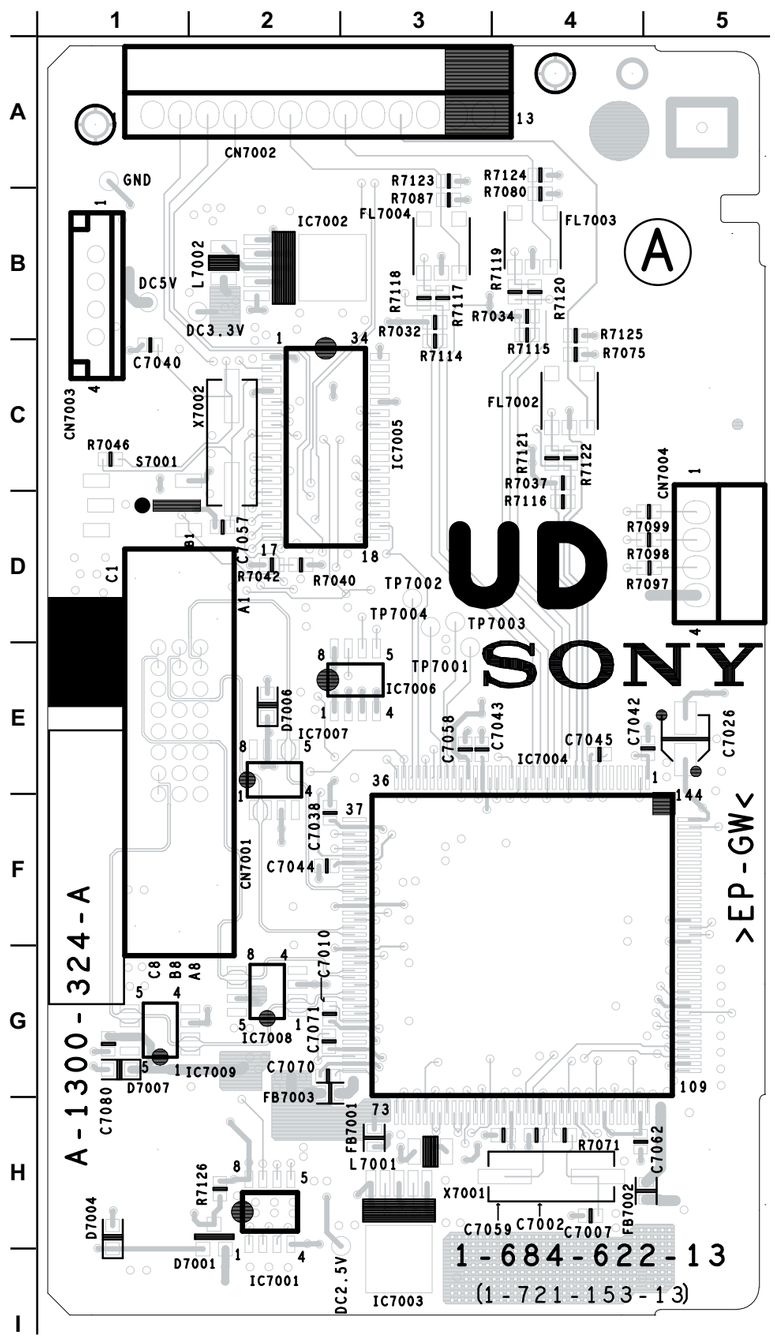


UD [DVI DECODER]

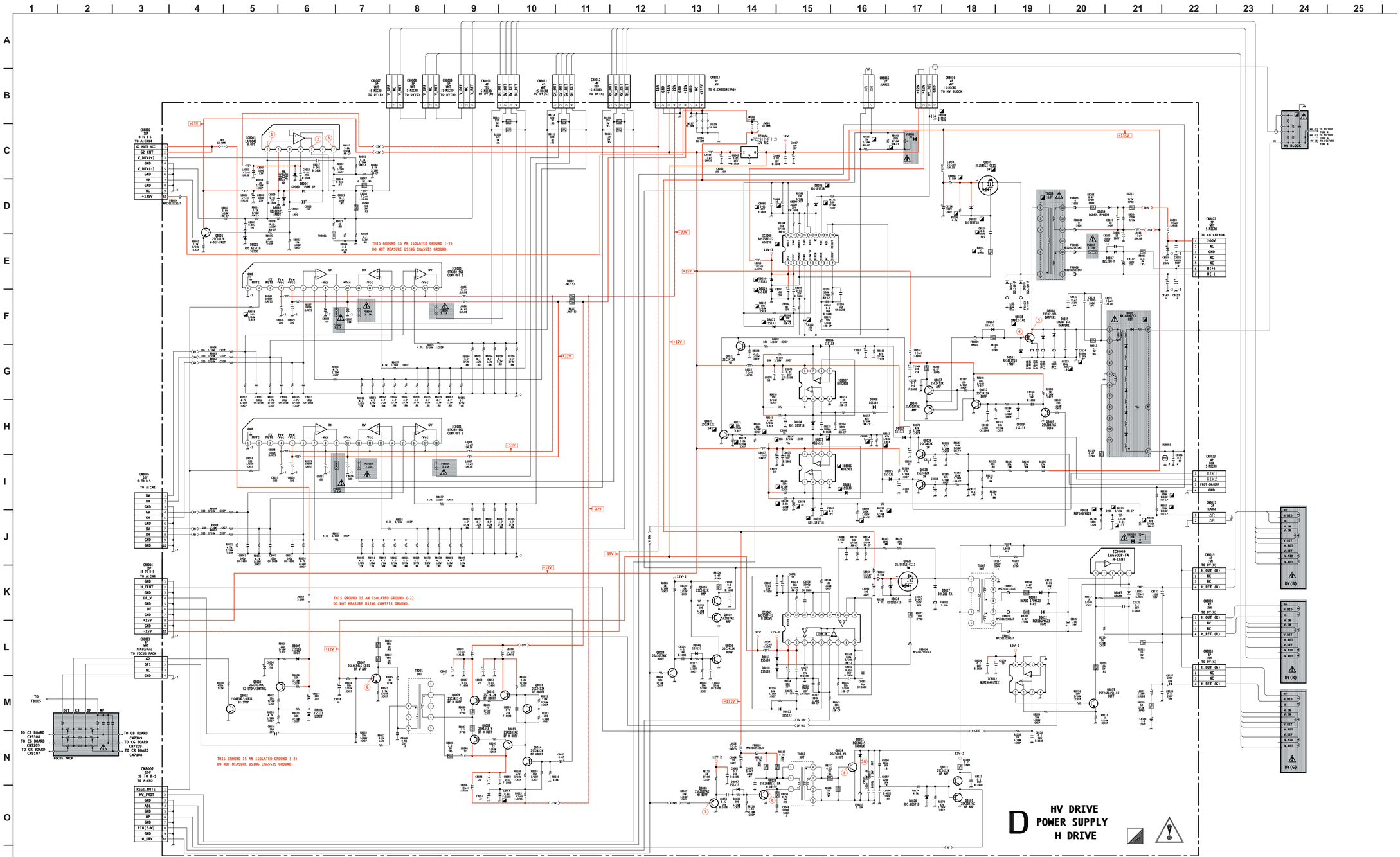
[COMPONENT SIDE]



[CONDUCTOR SIDE]



D BOARD SCHEMATIC DIAGRAM


D HV DRIVE
POWER SUPPLY
H DRIVE
THIS GROUND IS AN ISOLATED GROUND (-2)
DO NOT MEASURE USING CHASSIS GROUND.
THIS GROUND IS AN ISOLATED GROUND (-2)
DO NOT MEASURE USING CHASSIS GROUND.
9-965-935-01<RA6>D

D BOARD WAVEFORMS

1

500 mVp-p (V)

2

53.2 Vp-p (V)

3

500 mVp-p (V)

4

14.7 Vp-p (H)

5

940 Vp-p (H)

6

6.5 Vp-p (V)

7

3.5 Vp-p (H)

8

104 Vp-p (H)

9

7.6 Vp-p (H)

10

1030 Vp-p (H)

D BOARD IC VOLTAGE LIST

IC8001		14	0.3	15	GND	10	7.4
PIN	VOLT	15	0	16	3.2	11	7.4
1	GND	16	0	17	2.6	12	7.4
2	4.3	17	-22	18	9.1	13	GND
3	N/C	18	0.1	IC8006		14	7.1
4	-22.0	IC8003		PIN	VOLT	15	GND
5	22.0	PIN	VOLT	1	0.1	16	3.2
6	-0.3	1	1.3	2	5.0	17	2.6
7	-0.3	2	15.0	3	4.5	18	9.1
8	-22.0	3	-13.1	4	GND	IC8009	
9	-0.5	4	-15.0	5	0.0	PIN	VOLT
10	22.0	5	0.4	6	5.0	1	98.2
11	0.1	6	15.0	7	0.1	2	98.2
12	-22.0	7	1.3	8	15.0	3	94.0
13	0.0	IC8004		IC8007		4	97.8
14	0.0	PIN	VOLT	PIN	VOLT	5	101.1
15	0.0	I	15.0	1	0.1	IC8010	
16	0.0	O	12.0	2	5.0	PIN	VOLT
17	-22.0	G	GND	3	4.0	I	7.0
18	0.1	IC8005		4	GND	O	5.0
IC8002		PIN	VOLT	5	0.0	G	GND
PIN	VOLT	1	12.0	6	5.0	IC8012	
1	GND	2	12.0	7	0.1	PIN	VOLT
2	4.3	3	5.8	8	15.0	1	2.7
3	N/C	4	GND	IC8008		2	2.1
4	-22.0	5	3.8	PIN	VOLT	3	2.1
5	22.0	6	3.8	1	12.0	4	GND
6	-0.1	7	3.8	2	12.0	5	GND
7	-0.1	8	N/C	3	6.0	6	0.0
8	-22.0	9	3.8	4	GND	7	0.0
9	0.0	10	3.6	5	8.0	8	12.0
10	22.0	11	3.6	6	7.4		
11	0.5	12	3.6	7	7.4		
12	-22.0	13	GND	8	N/C		
13	0.3	14	7.1	9	3.3		

All voltages are in V.

D BOARD TRANSISTOR VOLTAGE LIST

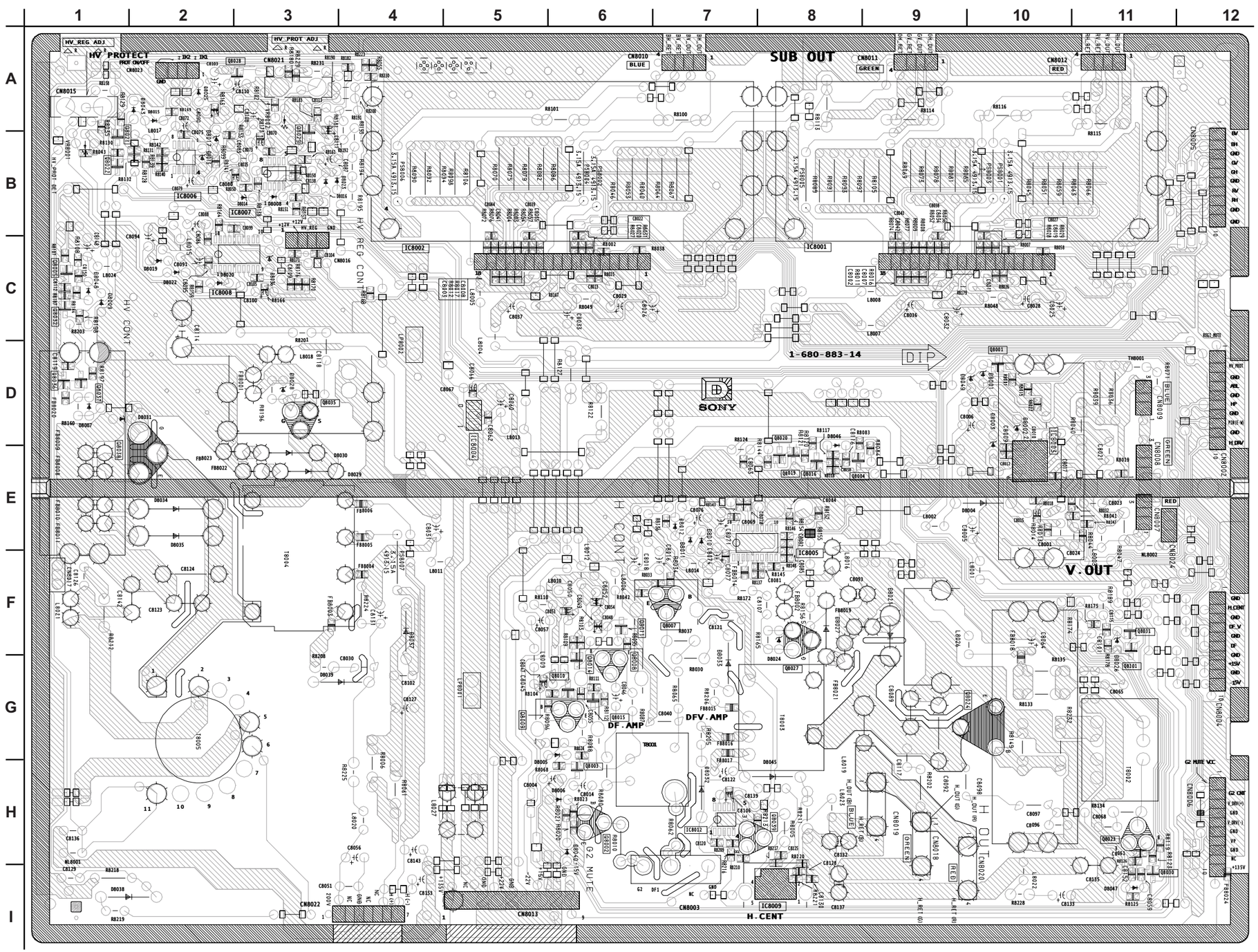
	B	C	E		B	C	E
Q8001	-0.4	15.0	0.1	**Q8022**	0.0	8.9	GND
Q8002	0	13.0	GND	**Q8023**	-0.5	68.0	GND
Q8003	14.6	0.0	14.6	**Q8024**	0.1	242.0	GND
Q8004	3.4	GND	4.0	**Q8028**	0.5	0.0	GND
Q8005	3.4	GND	4.1	**Q8029**	0.5	0.0	GND
Q8007	5.8	204.0	5.2	**Q8030**	3.4	GND	4.0
Q8008	2.8	-22.0	3.3	**Q8031**	0.2	12.0	0.6
Q8009	4.0	22.0	3.4	**Q8032**	3.4	4.1	GND
Q8010	4.5	22.0	4.0	**Q8036**	8.9	GND	8.7
Q8011	2.3	-22.0	2.7	**Q8037**	8.9	14.6	8.7
Q8014	-20.0	2.3	-20.6	**Q8039**	2.7	76.7	2.1
Q8015	2.9	4.5	2.3	**Q8041**	3.4	GND	8.9
Q8016	-0.3	7.4	GND	**Q8042**	9.6	29.8	GND
Q8019	7.4	GND	7.2	**Q8043**	8.9	192.0	0.1
Q8020	7.4	12.0	7.2	**Q8044**	0.6	0.0	GND
Q8021	0.0	8.9	GND	**Q8101**	0.2	GND	0.6
				Q8038	8.9	192.0	0.6

All voltages are in V.

	D	G	S
Q8027	115.6	130.9	135.9
Q8035	115.6	130.9	135.9

All voltages are in V.

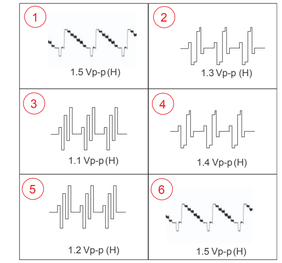
D [HV DRIVE, POWER SUPPLY, H DRIVE] [COMPONENT SIDE]



B BOARD SCHEMATIC DIAGRAM (1 OF 2)

The B board is not field repairable. If service is required, use the following part number to order a complete replacement board.
A-1136-271-A B Board, Complete

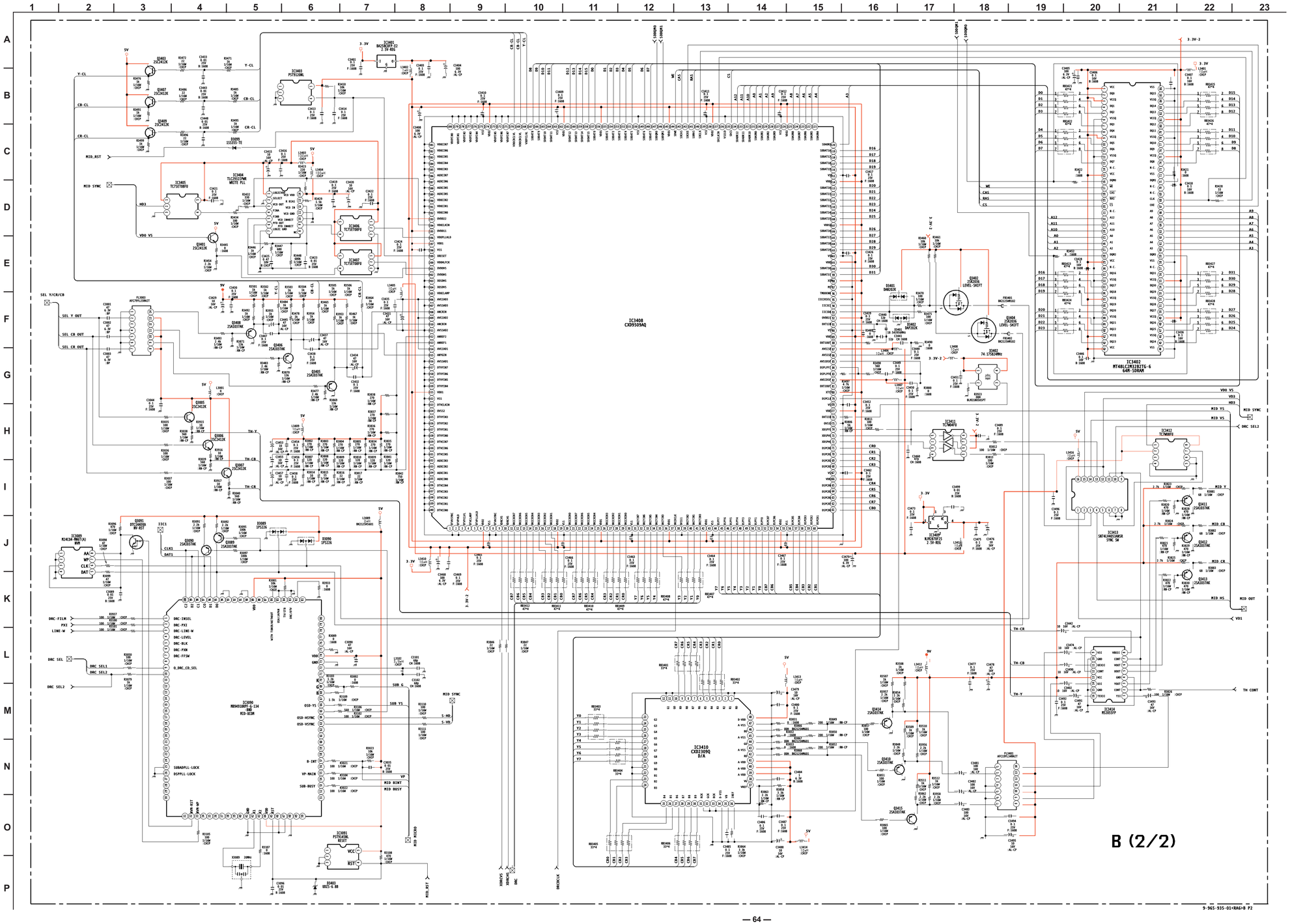
B BOARD WAVEFORMS



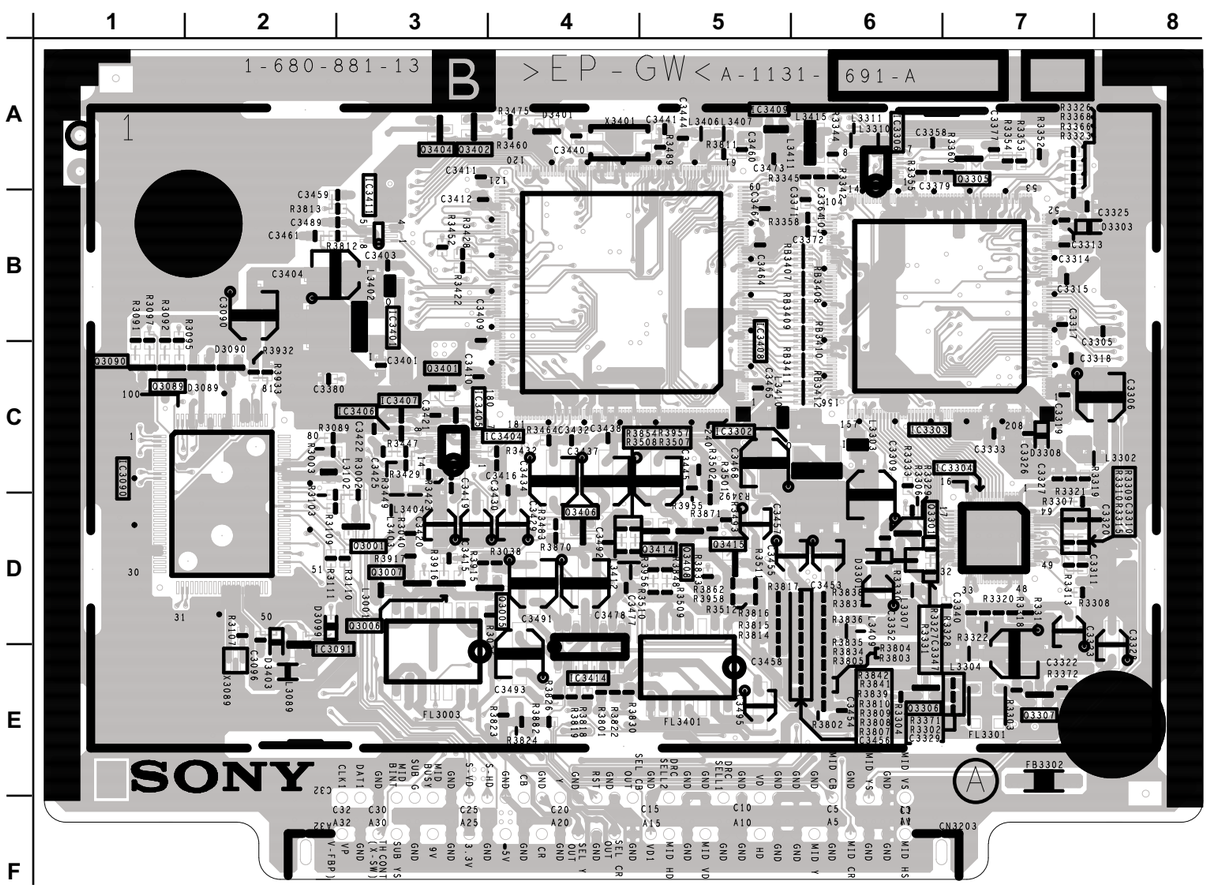
B (1/2)
AD-DRC

9-965-935-01<RA6>B P1

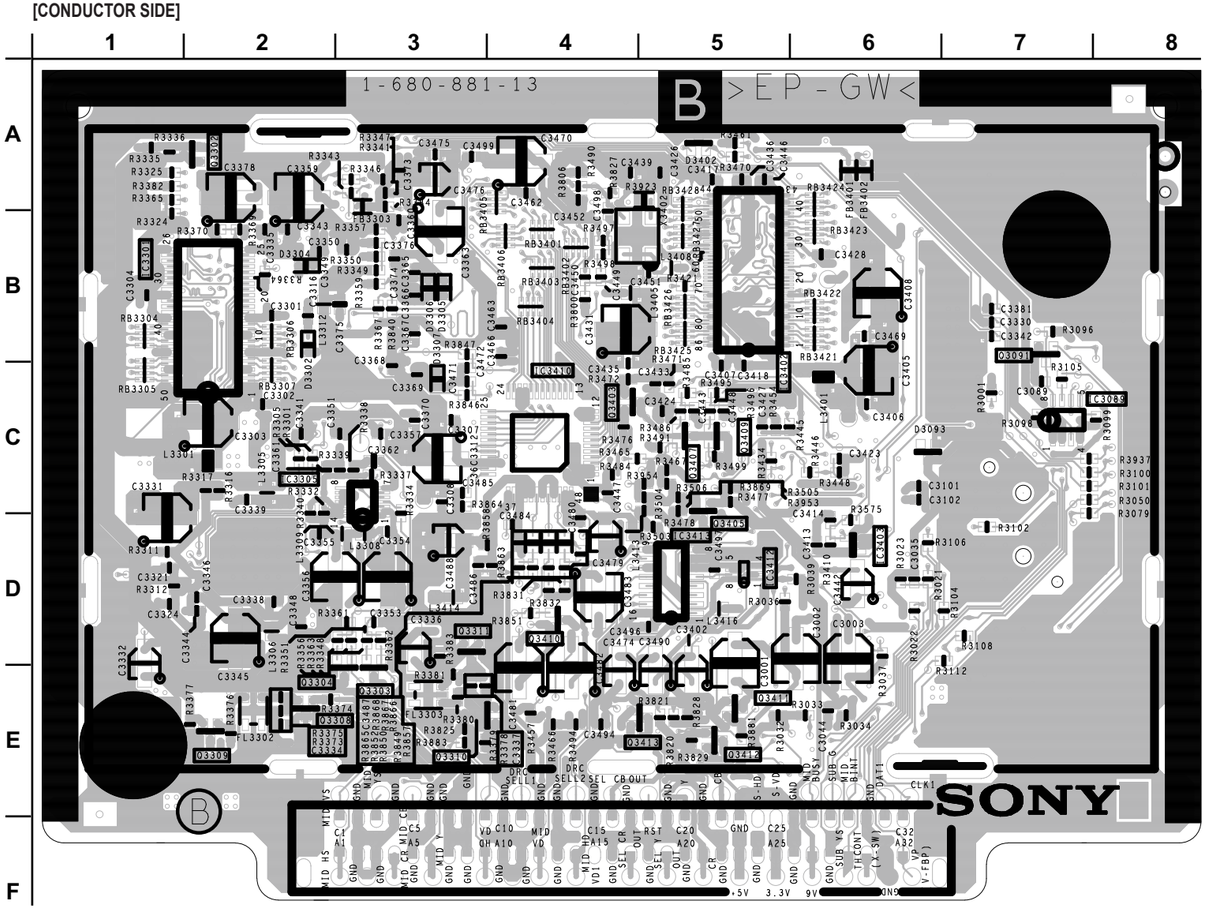
B BOARD SCHEMATIC DIAGRAM (2 OF 2)



B [AD-DRC] [COMPONENT SIDE]

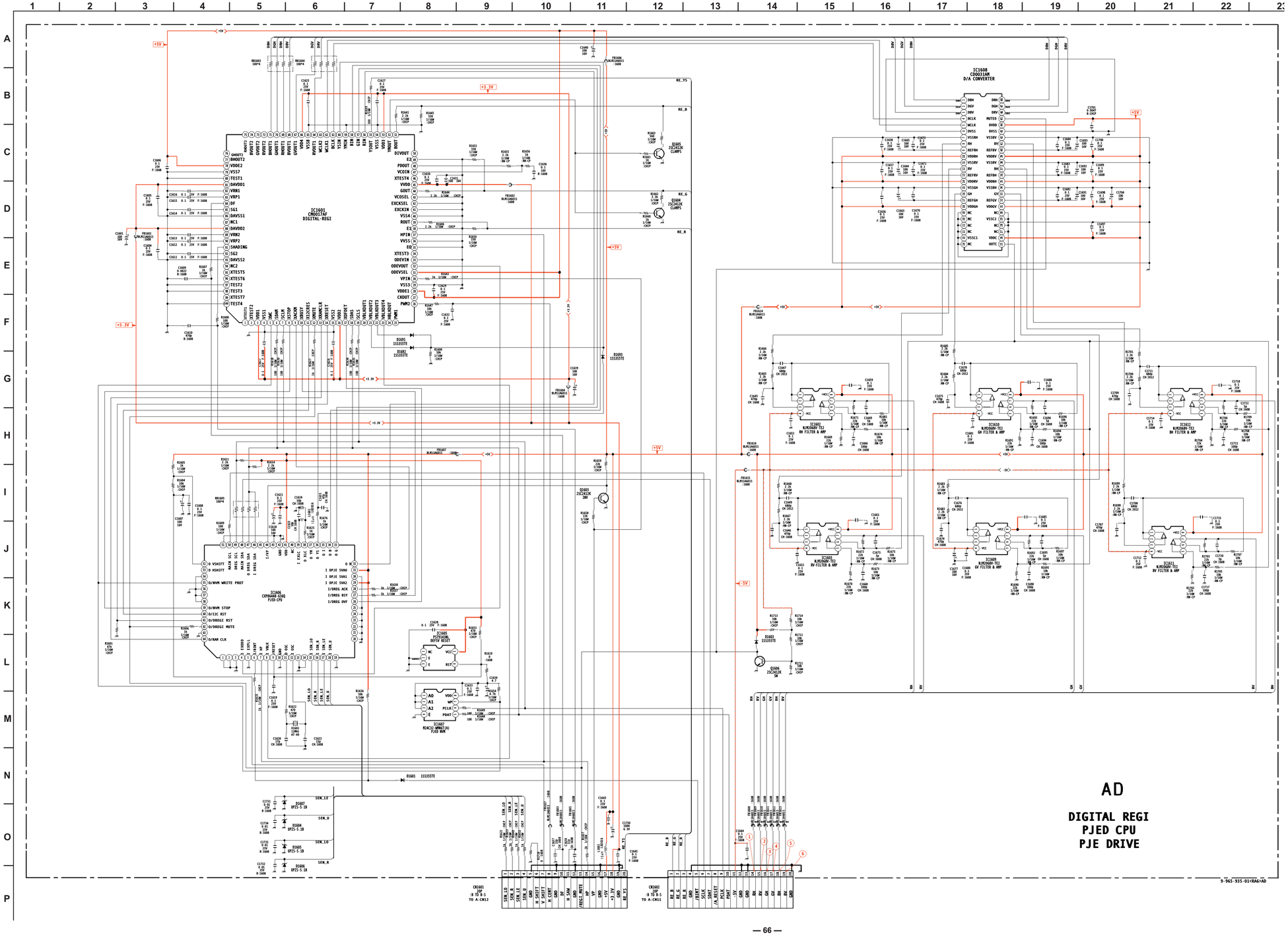


[CONDUCTOR SIDE]

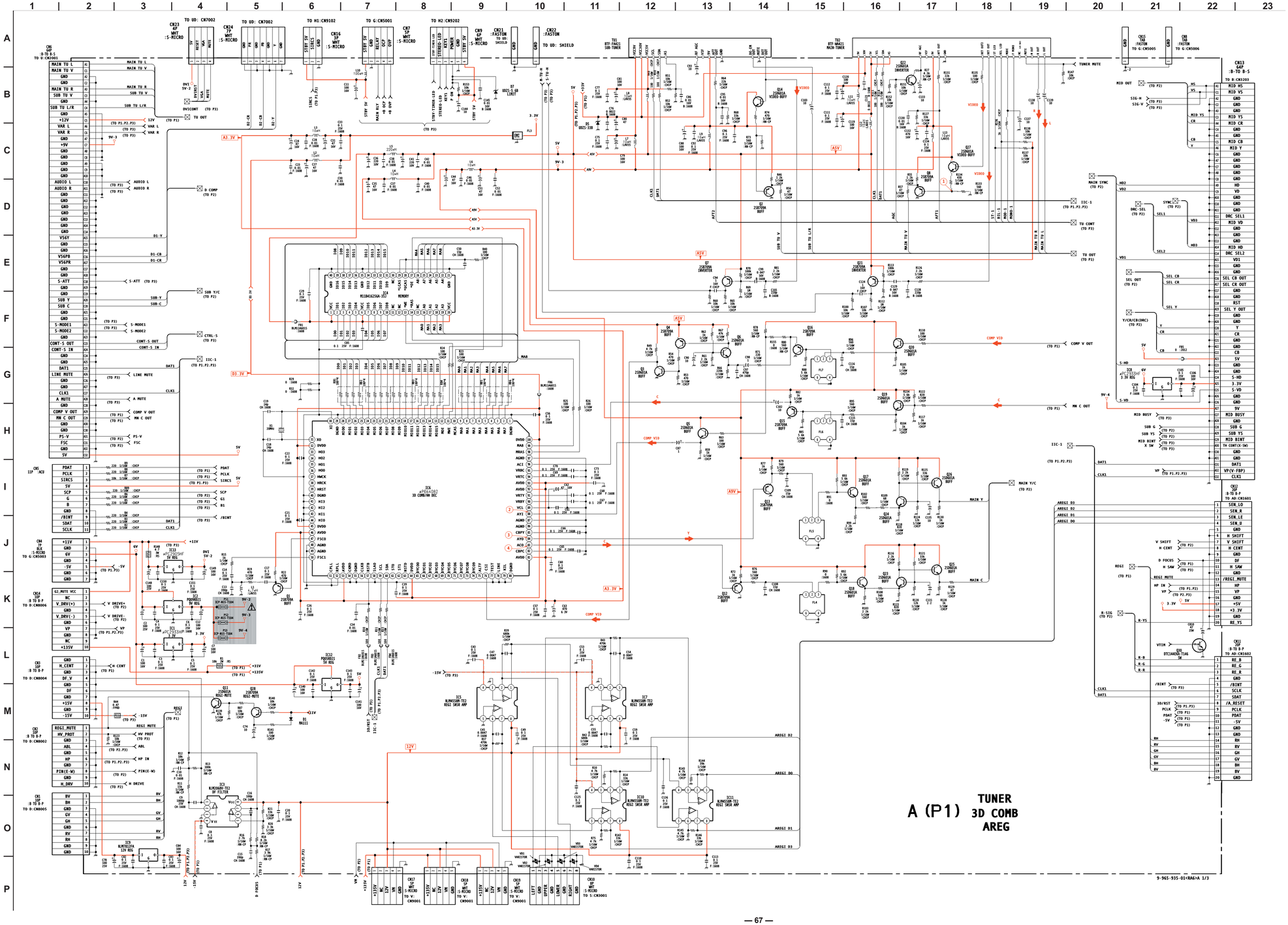


AD BOARD SCHEMATIC DIAGRAM

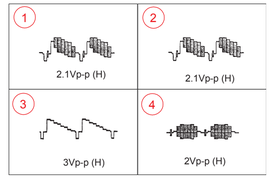
The AD board is not field repairable. If service is required, use the following part number to order a complete replacement board.
A-1299-523-A AD Board, Complete



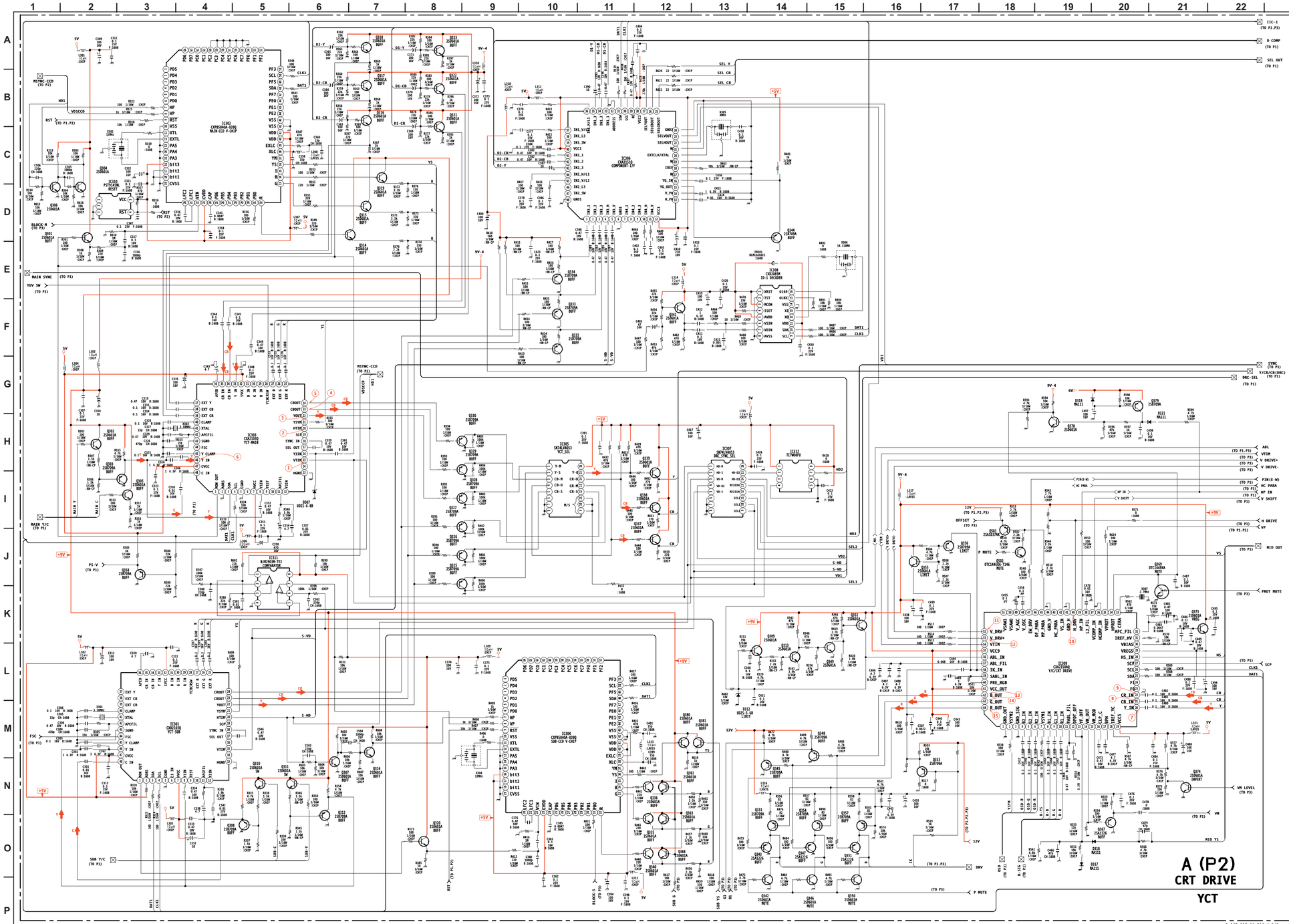
A BOARD SCHEMATIC DIAGRAM (1 OF 3)



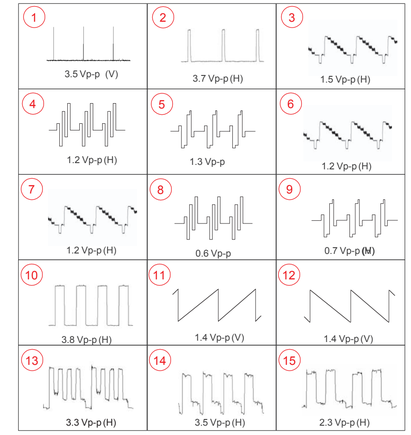
A BOARD WAVEFORMS



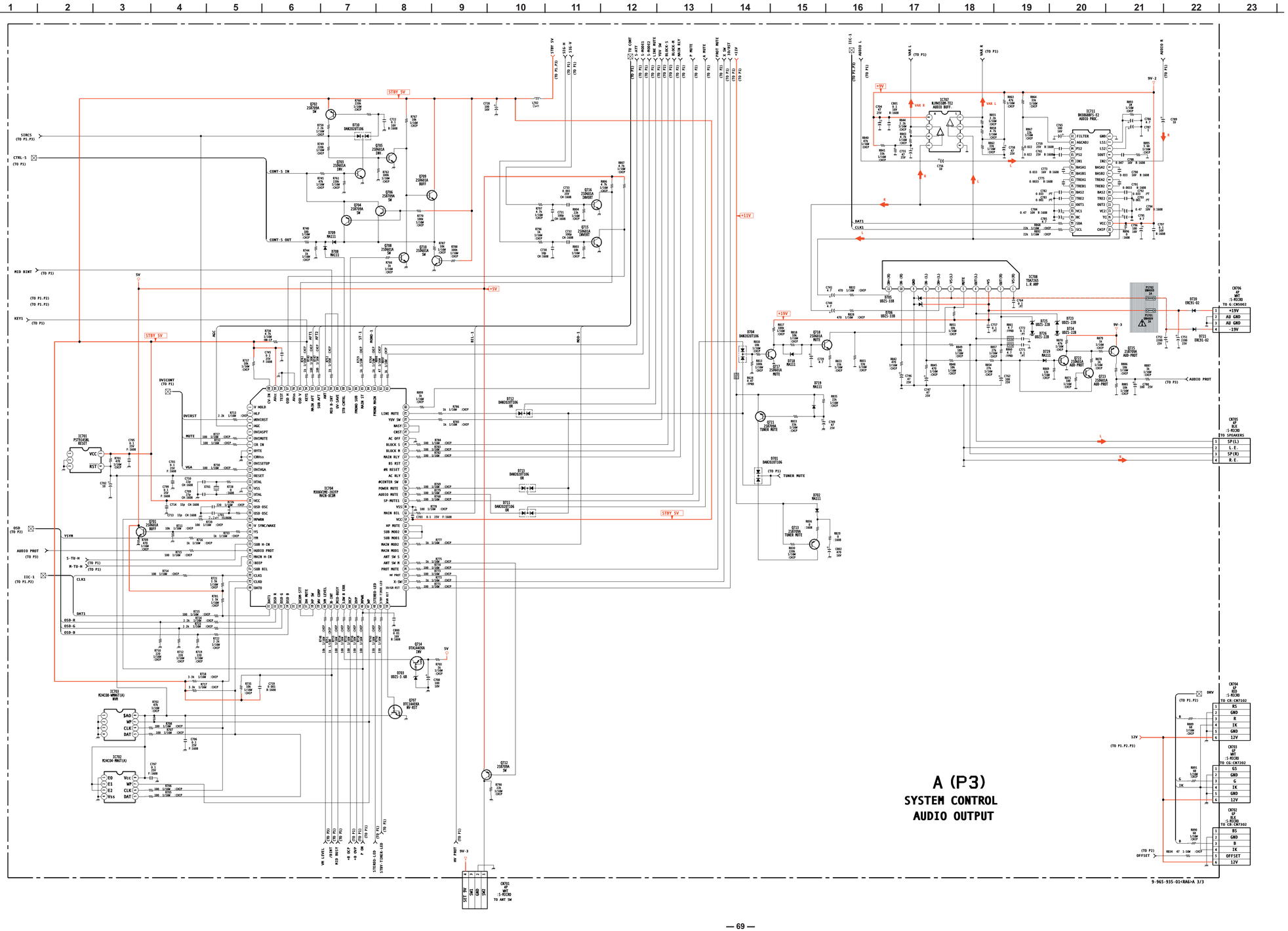
A BOARD SCHEMATIC DIAGRAM (2 OF 3)



A BOARD WAVEFORMS



A BOARD SCHEMATIC DIAGRAM (3 OF 3)



A BOARD IC VOLTAGE LIST

IC1		28	1	26	1.8	76	4.1	4	-15	24	2.2	24	1.6	8	2.8	8	5	58	NC	24	GND	6	1.9	38	3.3	5	GND
PIN	VOLT	29	1	27	2	77	GND	5	0.1	25	3.5	25	NC	9	NC	9	5	59	NC	25	2.6	7	1.6	39	0.7	6	GND
I	6	30	NC	28	2	78	GND	6	0	26	3.5	26	NC	10	NC	10	GND	60	NC	26	2.6	8	GND	40	3	7	HD2
O	3.3	31	1.9	29	GND	79	0	7	1	27	3.5	27	NC	11	2.4	11	2.5	61	NC	27	2.6	9	4.3	41	GND	8	5
GND	GND	32	2.5	30	1.4	80	GND	8	12	28	NC	28	NC	12	NC	12	2.1	62	NC	28	5	10	3.3	42	0	IC701	
IC2		33	1.3	31	1.5	81	3.2	IC11		29	NC	29	NC	13	GND	13	GND	63	NC	29	NC	11	5	43	2.5	PIN	VOLT
PIN	VOLT	34	1.7	32	3.2	82	1	1	1.2	30	NC	30	NC	14	NC	14	GND	64	NC	30	4.4	12	2.6	44	GND	1	NC
I	11	35	0	33	NC	83	1.6	2	0.1	31	NC	31	0	15	0.4	15	GND	IC305		31	4.4	13	2.4	45	2.1	2	GND
O	9	36	1.9	34	NC	84	1.7	3	0.3	32	5	32	0	16	2.5	16	5	PIN	VOLT	32	GND	14	GND	46	NC	3	GND
GND	GND	37	1.8	35	NC	85	1	4	-15	33	NC	33	0	17	2	17	5	1	2.4	33	2.9	15	0	47	3.9	4	5
4	11	38	1.8	36	NC	86	0	5	0.2	34	NC	34	0	18	3.1	18	GND	2	0	34	2.9	16	0	48	4.4	5	5
IC3		39	1.8	37	NC	87	0	6	0	35	NC	35	NC	19	NC	19	GND	3	2.8	35	2.9	IC309		49	5.4	IC702	
PIN	VOLT	40	0	38	NC	88	1.3	7	2	36	2.7	36	0	20	0	20	1.7	4	2.9	36	1	PIN	VOLT	50	NC	PIN	VOLT
1	1.5	IC5		39	NC	89	0.5	8	12	37	NC	37	NC	21	0	21	2.6	5	0	37	1	1	GND	51	NC	1	GND
2	0	PIN	VOLT	40	GND	90	0.9	IC12		38	NC	38	2.6	22	1.8	22	2.9	6	GND	38	NC	2	0	52	0	2	5
3	GND	1	0	41	0	91	1.6	PIN	VOLT	39	NC	39	2.6	23	2.1	23	5	7	GND	39	NC	3	GND	53	3.5	3	5
4	-15	2	0	42	0	92	3.2	I	6	40	1.7	40	5	24	2.2	24	1.8	8	GND	40	5	4	3.1	54	0.5	4	GND
5	1.1	3	GND	43	0	93	3.2	O	5	41	1.8	41	5	25	3.6	25	NC	9	4.9	41	2.9	5	3.2	55	9.1	5	4.4
6	1.1	4	-15	44	0	94	3.2	GND	GND	42	2.6	42	GND	26	3.6	26	NC	10	4.9	42	2.8	6	3.1	56	3.1	6	4.4
7	0.3	5	GND	45	3.2	95	2	4	6	43	GND	43	GND	27	3.6	27	NC	11	4.9	43	2.1	7	0	57	5	7	5
8	11.9	6	0	46	3.2	96	2.6	IC13		44	2.5	44	NC	28	2.9	28	NC	12	0	44	1	8	3.6	58	3.9	8	5
IC4		7	0.1	47	1.7	97	0	PIN	VOLT	45	3.2	45	NC	29	NC	29	NC	13	2.8	45	1	9	0	59	1.7	IC703	
PIN	VOLT	8	12	48	GND	98	0.5	I	11	46	3	46	NC	30	NC	30	NC	14	2.9	46	NC	10	3.6	60	1.7	PIN	VOLT
1	4.8	IC6		49	GND	99	1.5	O	5	47	4.9	47	NC	31	NC	31	0	15	2.6	47	NC	11	0	61	9	1	GND
2	2	PIN	VOLT	50	1.4	100	3.2	GND	GND	48	3.2	48	4.4	32	5	32	0	16	5	48	GND	12	0.4	62	2.7	2	GND
3	2	1	GND	51	0	IC7		IC301		IC302		49	NC	33	3.2	33	0	IC306		IC307		13	0.4	63	2.9	3	GND
4	1.8	2	1.5	52	0	PIN	VOLT	PIN	VOLT	PIN	VOLT	50	4.3	34	3.2	34	0	PIN	VOLT	PIN	VOLT	14	2.5	64	2.9	4	GND
5	1.9	3	1.5	53	3.2	1	0.1	1	2.3	1	NC	51	NC	35	3.2	35	NC	1	2.9	1	0.5	15	3.8	IC310		5	4.4
6	4.8	4	1.5	54	GND	2	0	2	4.7	2	NC	52	NC	36	3.2	36	0	2	2.9	2	0.5	16	2.6	PIN	VOLT	6	4.4
7	1.6	5	1.5	55	GND	3	GND	3	4.4	3	NC	53	NC	37	3.6	37	NC	3	2.9	3	0.5	17	2.6	1	NC	7	5
8	1.4	6	1.5	56	NC	4	-15	4	4.5	4	NC	54	NC	38	3.2	38	2.5	4	1.3	4	0.5	18	1.1	2	GND	8	5
9	1.1	7	1.5	57	5	5	GND	5	GND	5	NC	55	GND	39	3.3	39	2.5	5	1	5	0.5	19	5	3	GND	IC704	
10	0.8	8	1.5	58	GND	6	0	6	NC	6	NC	56	GND	40	1.7	40	5	6	GND	6	GND	20	3.6	4	5	PIN	VOLT
11	NC	9	1.5	59	4.5	7	0.2	7	5	7	0.4	57	GND	41	1.8	41	5	7	NC	7	GND	21	0	5	5	1	NC
12	NC	10	1	60	4.5	8	12	8	3	8	5	58	GND	42	2.6	42	GND	8	NC	8	GND	22	3.1	IC311		2	NC
13	2.9	11	2.8	61	NC	IC8		9	NC	9	5	59	GND	43	GND	43	GND	9	NC	9	4.9	23	GND	PIN	VOLT	3	0
14	0.5	12	2.4	62	NC	PIN	VOLT	10	NC	10	GND	60	GND	44	2.5	44	NC	10	1	10	4.9	24	NC	1	5	4	0
15	NC	13	1.9	63	NC	I	6	11	2.4	11	2.5	61	NC	45	3.2	45	NC	11	1	11	0	25	4.4	2	0.4	5	NC
16	1.5	14	2.5	64	3.2	O	3.3	12	NC	12	2.2	62	NC	46	2.8	46	NC	12	5	12	0.4	26	4.4	3	2.5	6	0
17	1.5	15	1.3	65	NC	G	GND	13	GND	13	GND	63	NC	47	5	47	NC	13	4.1	13	0.5	27	0.7	4	GND	7	4.7
18	1.5	16	1.7	66	NC	IC9		14	NC	14	GND	64	NC	48	3.2	48	SDA	14	4.1	14	0.4	28	0.2	5	2.5	8	GND
19	1.5	17	1.9	67	NC	PIN	VOLT	15	0.5	15	GND	IC303		IC304		49	NC	15	3.2	15	0.5	29	5	6	0.5	9	GND
20	4.8	18	1.8	68	NC	I	15	16	NC	16	5	PIN	VOLT	PIN	VOLT	50	SCL	16	2.8	16	5	30	5.7	7	5	10	NC
21	0	19	1.9	69	NC	O	12	17	0	17	GND	1	1.8	1	NC	51	NC	17	NC	IC308		31	1.3	8	5	11	0
22	1.5	20	1.8	70	NC	GND	GND	18	3.4	18	GND	2	GND	2	NC	52	NC	18	1	PIN	VOLT	32	3.1	IC312		12	4.9
23	1.5	21	0.9	71	NC	IC10		19	NC	19	GND	3	4.4	3	NC	53	NC	19	NC	1	5	33	1.6	PIN	VOLT	13	2.3
24	1.5	22	1.3	72	NC	PIN	VOLT	20	0.5	20	1.7	4	4.4	4	NC	54	NC	20	2.9	2	GND	34	0	1	5	14	GND
25	1.5	23	1.4	73	NC	1	0.1	21	0	21	2.6	5	GND	5	NC	55	NC	21	NC	3	5	35	0.3	2	0.5	15	2.4
26	1.5	24	1.6	74	NC	2	0	22	2.1	22	2.4	6	NC	6	NC	56	NC	22	0.4	4	1.4	36	GND	3	NC	16	4.9
27	2.4	25	1.8	75	NC	3	0	23	2.2	23	5	7	4.8	7	0.4	57	NC	23	0.1	5	5	37	2.7	4	GND	17	0

A BOARD IC VOLTAGE LIST (Continued)

18	0	68	NC	6	-19
19	0	69	NC	7	0
20	NC	70	NC	8	0
21	0	71	NC	9	0
22	0	72	6.3	10	0
23	0	73	0	11	0
24	GND	74	0	**IC711**	
25	0	75	GND	**PIN**	**VOLT**
26	NC	76	0	1	GND
27	NC	77	0	2	0
28	4.4	78	0	3	0
29	4.9	79	0	4	4.5
30	4.9	80	NC	5	4.5
31	4.4	81	0	6	4.5
32	0	82	0	7	4.5
33	0	83	0	8	4.5
34	0	84	NC	9	4.5
35	NC	85	0	10	4.5
36	0	86	NC	11	4.5
37	4.6	87	0	12	0
38	0	88	0	13	1.2
39	0	89	0	14	2
40	0	90	0	15	9
41	2.3	91	0	16	9
42	0	92	0	17	4.4
43	4.6	93	0	18	4.4
44	2.8	94	4.6	19	2
45	0.1	95	4.6	20	1.2
46	0	96	GND	21	4.5
47	4.6	97	4.6	22	4.5
48	5	98	GND	23	4.5
49	5	99	4.9	24	4.5
50	0	100	4.6	25	4.5
51	5	**IC707**		26	4.6
52	0	**PIN**	**VOLT**	27	4.5
53	2.8	1	4.8	28	4.5
54	0	2	4.5	29	4.5
55	0	3	4.5	30	4.5
56	NC	4	GND	31	2.9
57	NC	5	4.6	32	4.5
58	0	6	4.5		
59	0	7	4.8		
60	0	8	9		
61	0	**IC708**			
62	4.9	**PIN**	**VOLT**		
63	4.9	1	-19		
64	GND	2	0		
65	0	3	22.1		
66	NC	4	0		
67	0	5	11.6		

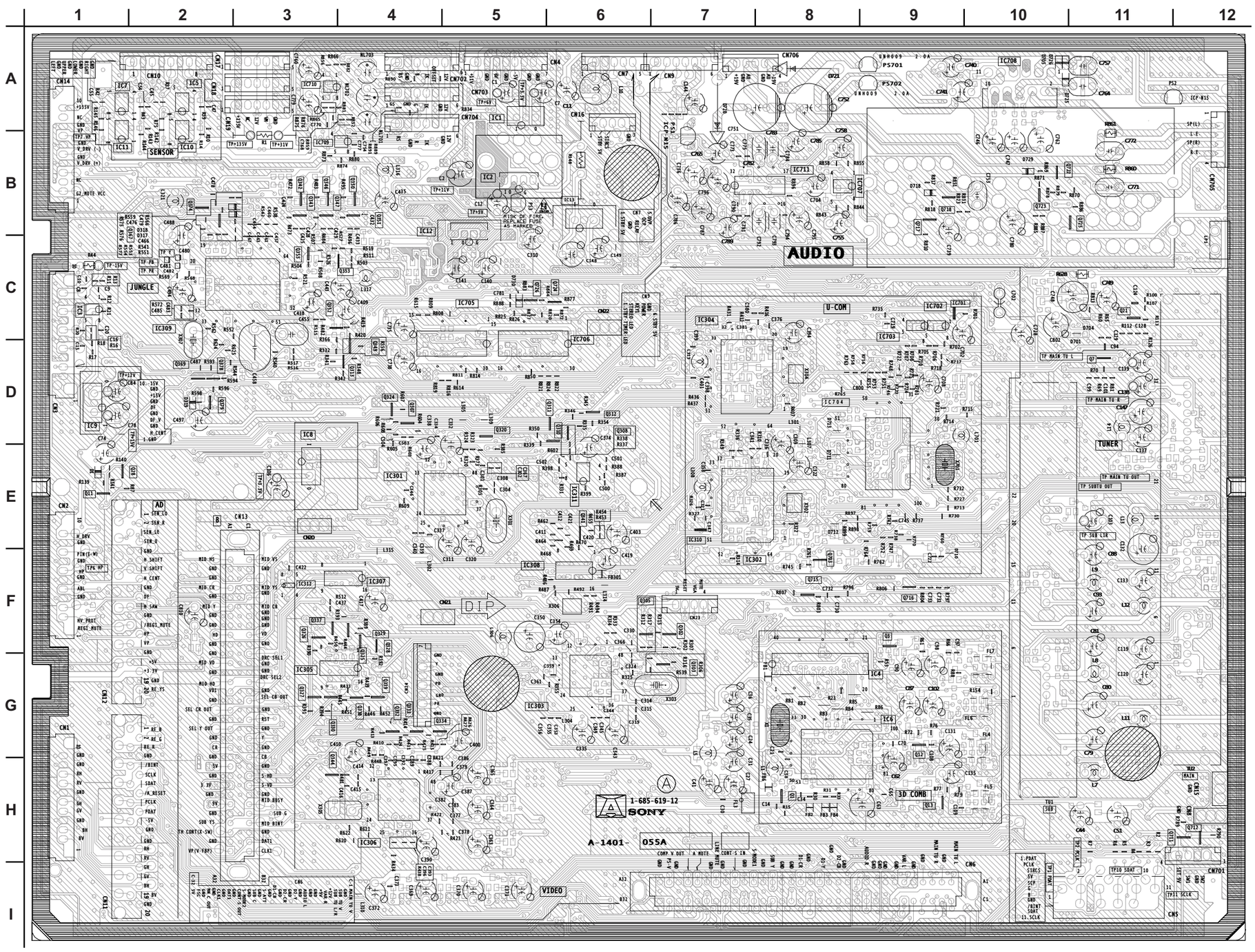
All voltages are in V.

A BOARD TRANSISTOR VOLTAGE LIST

	B	C	E		B	C	E		B	C	E
Q1	1.9	GND	2.5	**Q321**	4.4	9.1	3.8	**Q380**	0	9.1	0
Q2	2.2	2.9	GND	**Q322**	4.4	9.1	3.8	**Q381**	0	9.1	0
Q3	0.1	0	GND	**Q323**	4.4	9.1	3.8	**Q501**	2.1	2.7	GND
Q4	4.8	0.6	5	**Q324**	0.5	0.4	GND	**Q502**	0.8	1.4	GND
Q5	6.2	8.9	5.5	**Q325**	2.2	GND	0	**Q701**	0	5	0
Q6	3.4	4.8	3.7	**Q326**	2.2	GND	0	**Q702**	4.4	4	5
Q7	5.3	0.9	5	**Q327**	2.2	GND	0	**Q703**	0	4.2	GND
Q8	2.4	3	GND	**Q328**	1.8	GND	2.5	**Q704**	4.9	0	0
Q11	0	10.4	GND	**Q329**	2.1	GND	2.8	**Q705**	0.6	0.1	GND
Q12	1.7	GND	2.4	**Q330**	2.2	GND	2.8	**Q706**	4.3	0	0
Q13	1.6	GND	2.3	**Q331**	8.5	3.6	9.2	**Q707**	0	5	GND
Q14	4.7	9	0	**Q332**	2.1	GND	2.8	**Q708**	0	0.1	GND
Q15	2.9	GND	3.5	**Q333**	2.1	GND	2.6	**Q709**	0.1	5	0
Q16	2.8	GND	3.5	**Q334**	2.2	GND	2.8	**Q710**	0.6	0	GND
Q17	2.9	8.9	2.3	**Q335**	0	9.1	0	**Q712**	4.9	0	5
Q18	3	8.9	2.3	**Q336**	0	9.1	0	**Q713**	10.3	0	10.3
Q19	3.7	8.9	3.1	**Q337**	2.4	5	2.2	**Q714**	0	0	4.9
Q20	3.7	8.9	3.1	**Q338**	2.4	5	2.2	**Q715**	0	4.7	GND
Q21	5	0.8	5	**Q339**	2.5	5	1.9	**Q716**	0	5	GND
Q22	0	4.1	GND	**Q340**	0	9.1	0	**Q717**	0.3	13.1	GND
Q23	2.3	6.6	1.7	**Q341**	3.2	5	2.5	**Q718**	12.3	11.6	11.6
Q24	2.3	6	1.8	**Q342**	0	0	GND	**Q721**	10.3	0	10.4
Q25	6.6	8.9	5.9	**Q343**	2.9	GND	3.6	**Q722**	0	9	GND
Q26	6	8.9	5.3	**Q344**	3.2	GND	3.8	**Q723**	0	9	0
Q27	4.8	9	4.2	**Q345**	2.9	GND	3.5	**Q725**	8.9	0	9
Q28	10.4	0	10.2	**Q346**	0	0	GND				
Q30	0	0	GND	**Q347**	2.9	GND	3.7				
Q301	0	5	1.2	**Q348**	2.7	GND	3.3				
Q302	5.4	9.1	4.8	**Q349**	7.9	8.7	GND				
Q303	3.2	GND	6	**Q350**	0	0	GND				
Q304	0.4	0.5	GND	**Q351**	2.7	GND	3.5				
Q305	6	9.1	5.3	**Q352**	7.9	9	3.1				
Q306	0.2	2.5	GND	**Q353**	9.3	0	3.9				
Q307	0.2	2.5	GND	**Q354**	8.5	3.7	9.2				
Q308	2.6	GND	6.6	**Q355**	2.2	9.1	3.9				
Q309	2.9	9.1	8.1	**Q356**	4.4	GND	4				
Q310	3.7	9.1	3.1	**Q357**	8.5	3.4	9.2				
Q311	3.9	9.1	3.3	**Q358**	1.1	GND	1.7				
Q312	1.6	GND	2.3	**Q361**	0	9.1	0				
Q313	7.9	8.8	GND	**Q363**	0	9.1	0				
Q314	0	8.9	0	**Q367**	2.4	GND	3.3				
Q315	0	9	0	**Q368**	0	9.1	0				
Q316	4.4	9.1	3.8	**Q369**	0	0	GND				
Q317	4.4	9.1	3.8	**Q373**	5.7	9.1	5				
Q318	4.4	9.1	3.8	**Q374**	0	2.6	GND				
Q319	0	9.1	0	**Q378**	0.7	0.1	GND				
Q320	2.3	5	1.7	**Q379**	9.1	0.7	9.1				

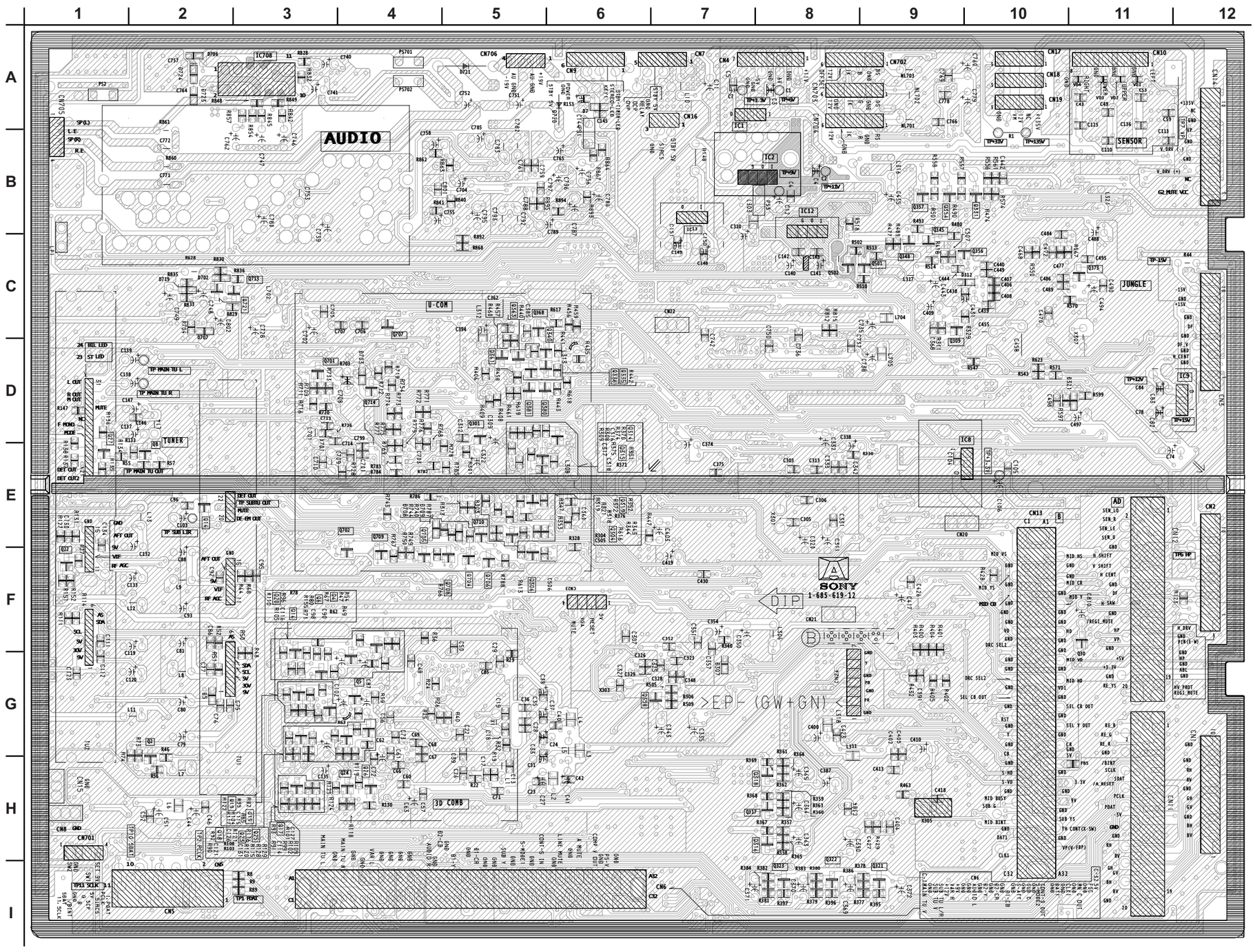
All voltages are in V.

A [TUNER, 3D COMB, AREG, CRT DRIVE, YCT, SYSTEM CONTROL, AUDIO OUTPUT] [COMPONENT SIDE]

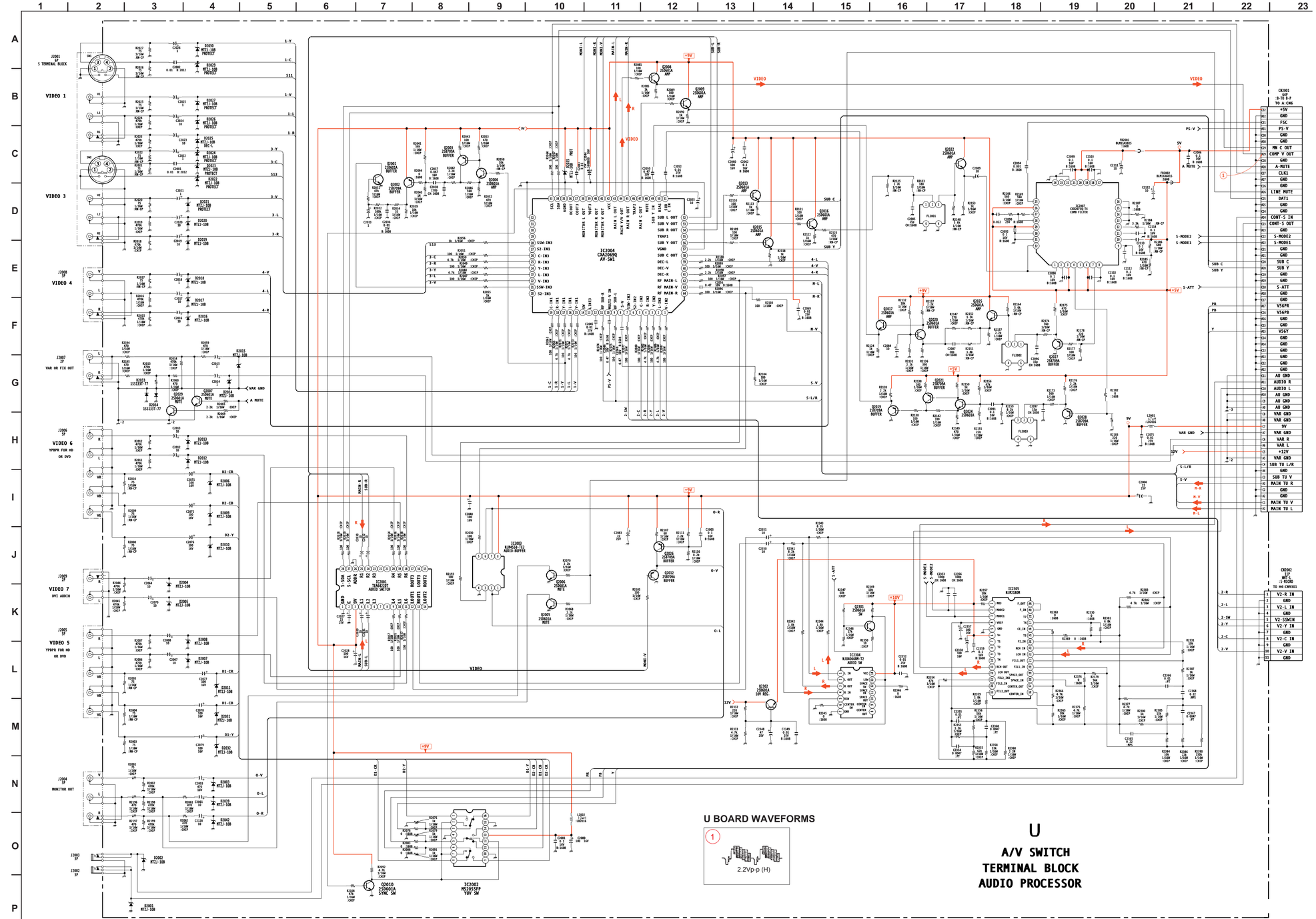


A

[TUNER, 3D COMB, AREG, CRT DRIVE, YCT, SYSTEM CONTROL, AUDIO OUTPUT] [CONDUCTOR SIDE]



U BOARD SCHEMATIC DIAGRAM



U BOARD IC VOLTAGE LIST

IC2001		IC2003		37	NC	19	5.0	17	6.0
PIN	VOLT	PIN	VOLT	38	4.5	20	NC	18	6.0
1	GND	1	4.5	39	NC	21	5.0	19	6.0
2	4.5	2	4.5	40	4.5	22	GND	20	6.0
3	9.0	3	4.4	41	4.4	23	NC	21	6.0
4	4.5	4	GND	42	9.0	24	GND	22	6.0
5	4.5	5	4.4	43	4.4	25	2.5	23	6.0
6	4.5	6	4.5	44	4.3	26	5.0	24	6.0
7	NC	7	4.5	45	4.5	27	2.2	25	6.0
8	NC	8	9.0	46	NC	28	2.2	26	6.0
9	NC	IC2004		47	4.4	29	5.0	27	6.0
10	4.4	PIN	VOLT	48	NC	30	GND	28	NC
11	4.4	1	3.9	49	5.3	31	GND	29	6.0
12	4.5	2	4.4	50	4.5	32	1.8	30	6.0
13	4.5	3	3.9	51	4.4	IC2304		All voltages are in V.	
14	NC	4	4.4	52	4.5	PIN	VOLT		
15	NC	5	0.5	53	4.9	1	4.5		
16	NC	6	NC	54	4.5	2	4.5		
17	NC	7	4.9	55	NC	3	4.5		
18	4.4	8	4.5	56	4.5	4	4.5		
19	4.4	9	4.4	57	GND	5	8.6		
20	NC	10	4.3	58	4.3	6	0.3		
21	NC	11	4.4	59	4.4	7	GND		
22	NC	12	4.4	60	3.9	8	4.5		
23	4.4	13	NC	61	4.4	9	4.5		
24	4.5	14	NC	62	4.4	10	4.5		
25	4.4	15	3.9	63	4.3	11	4.5		
26	GND	16	4.4	64	4.5	12	0.3		
27	4.4	17	3.9	IC2007		13	8.6		
28	4.4	18	4.4	PIN	VOLT	14	9.0		
IC2002		19	4.4	1	1.8	IC2305			
PIN	VOLT	20	NC	2	GND	PIN	VOLT		
1	4.6	21	4.9	3	5.0	1	11.1		
2	5.0	22	3.9	4	1.1	2	0.0		
3	3.1	23	3.9	5	NC	3	0.0		
4	GND	24	4.4	6	5.0	4	6.0		
5	3.1	25	3.9	7	1.3	5	GND		
6	3.1	26	4.4	8	GND	6	10.0		
7	5.0	27	NC	9	2.0	7	NC		
8	4.6	28	0.1	10	2.7	8	NC		
9	4.6	29	NC	11	1.0	9	NC		
10	GND	30	NC	12	2.0	10	NC		
11	4.6	31	NC	13	GND	11	6.0		
12	5.0	32	GND	14	0.0	12	6.0		
13	9.0	33	4.4	15	GND	13	6.0		
14	4.6	34	4.4	16	GND	14	6.0		
15	GND	35	GND	17	NC	15	6.0		

U BOARD TRANSISTOR TABLE

	B	C	E
Q2001	0.1	4.9	GND
Q2002	8.4	0.1	9.0
Q2003	7.8	5.6	8.5
Q2004	3.8	7.8	3.2
Q2005	0.3	0.0	GND
Q2006	0.3	0.0	GND
Q2007	0.4	0.0	0.0
Q2008	4.3	9.0	3.7
Q2009	4.4	9.0	3.7
Q2010	0.0	5.0	GND
Q2012	4.5	GND	5.1
Q2013	4.3	9.0	3.7
Q2015	4.5	9.0	3.9
Q2016	4.7	9.0	8.7
Q2017	5.0	9.0	4.4
Q2019	1.3	GND	2.0
Q2020	1.6	5.0	1.0
Q2021	4.2	1.3	4.8
Q2022	3.3	9.0	2.7
Q2024	1.5	4.2	0.9
Q2025	2.6	9.0	2.0
Q2026	7.2	5.1	7.9
Q2027	1.3	GND	2.0
Q2028	1.1	GND	1.7
Q2029	0.4	0.0	GND
Q2301	3.4	11.9	5.0
Q2302	0.0	12.0	12.0

All voltages are in V.

U BOARD WAVEFORMS

1

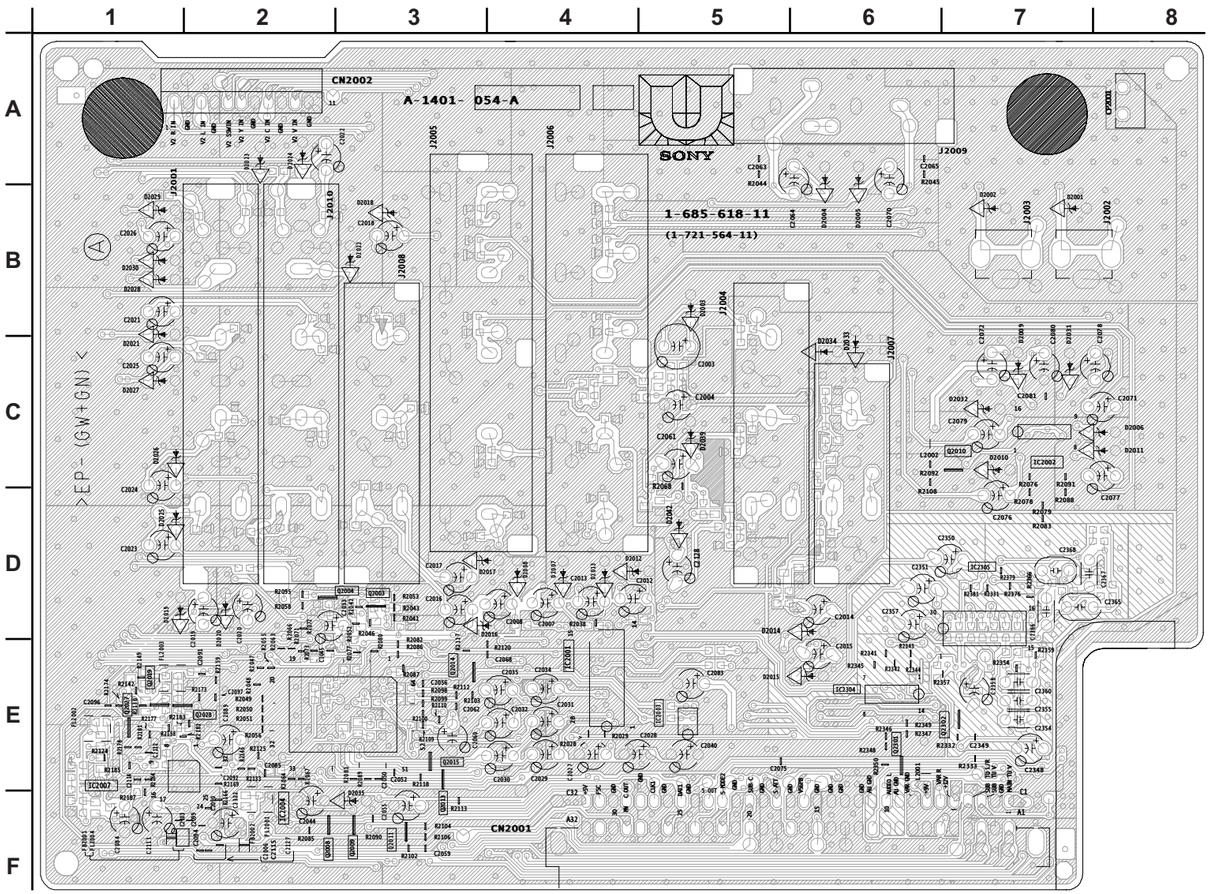
2.2Vp-p (H)

U

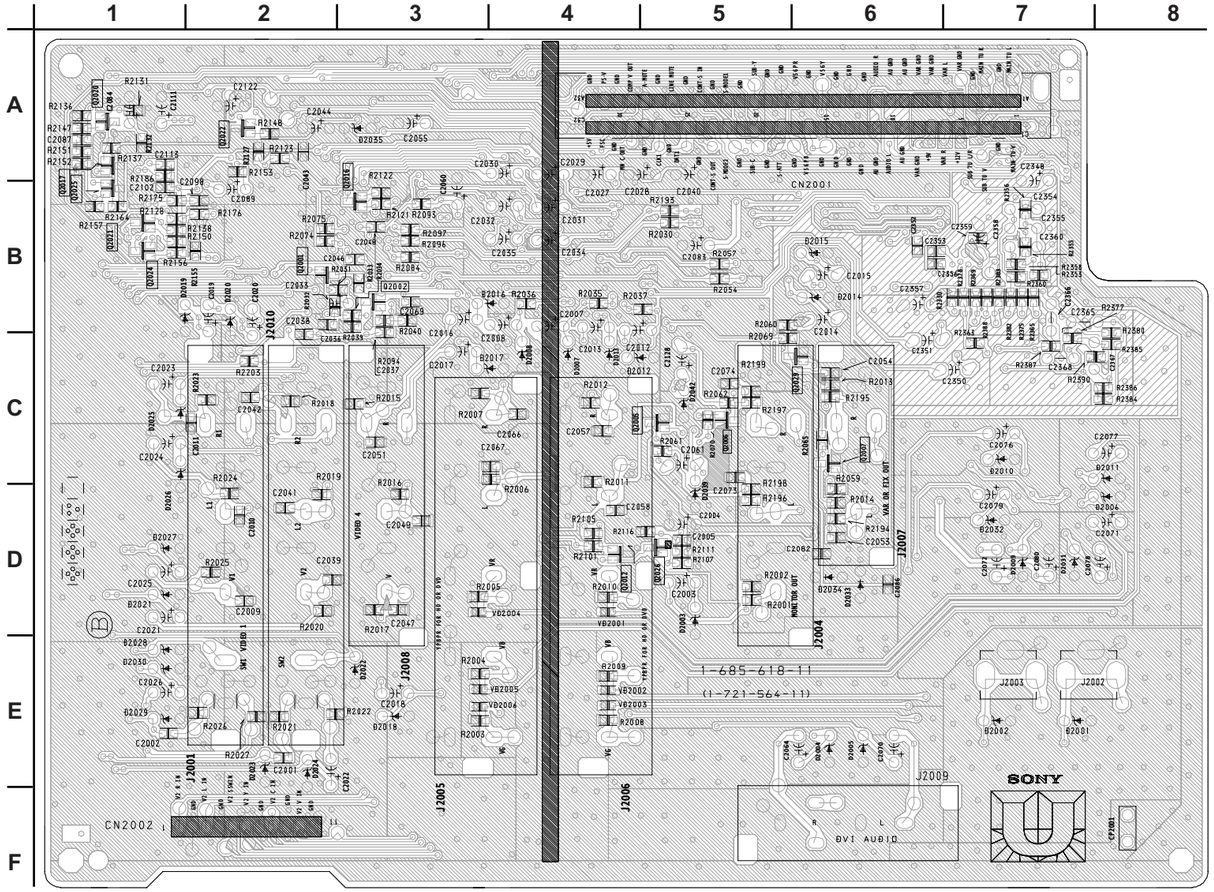
A/V SWITCH
TERMINAL BLOCK
AUDIO PROCESSOR

U [AV SWITCH, TERMINAL BLOCK, AUDIO PROCESSOR]

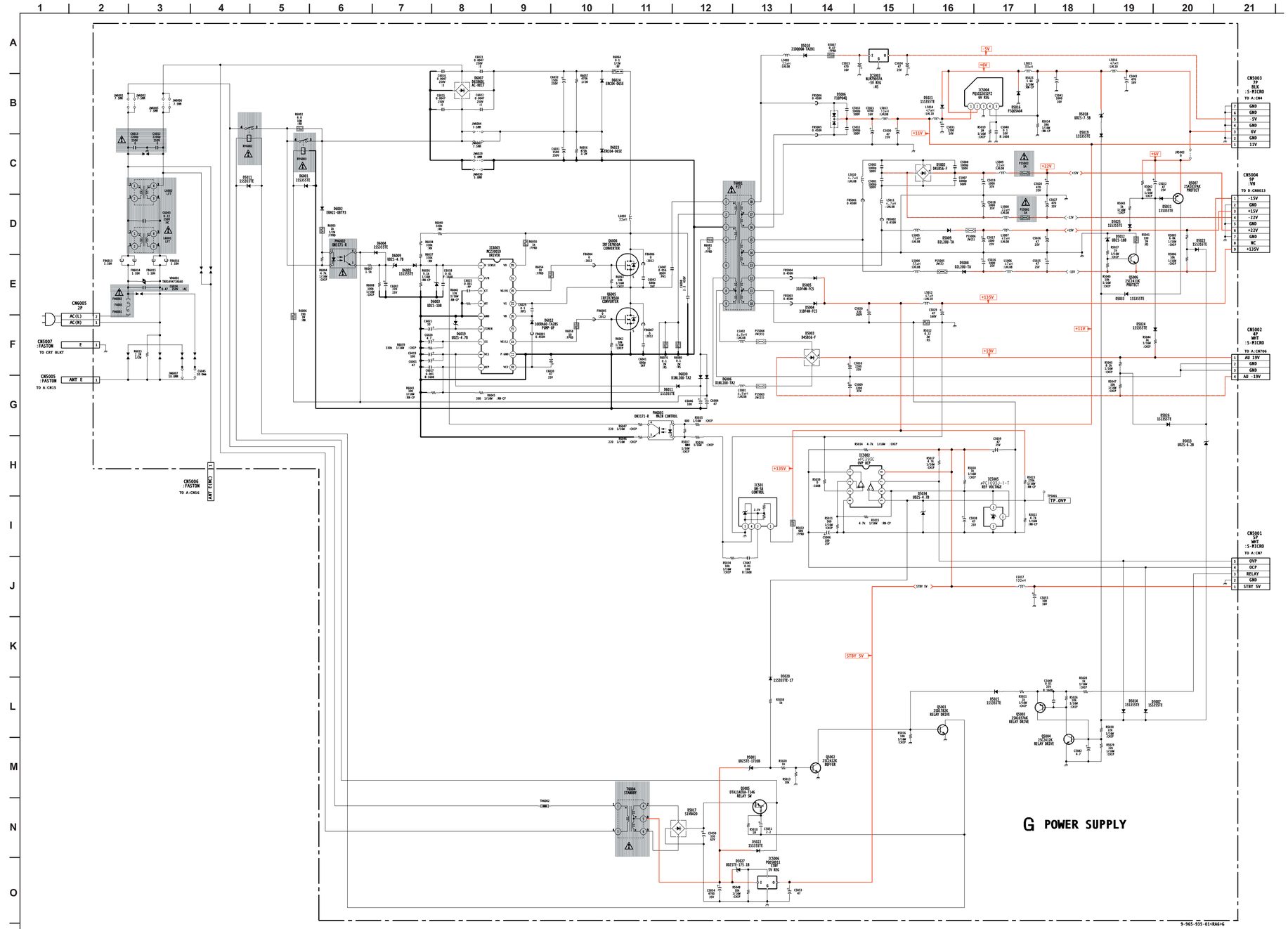
[COMPONENT SIDE]



[CONDUCTOR SIDE]



G BOARD SCHEMATIC DIAGRAM



G BOARD IC VOLTAGE LIST

IC501		IC5004		IC6003	
PIN	VOLT	PIN	VOLT	PIN	VOLT
1	134.4	1	10.4	1	-0.3
3	2.5	2	6.5	2	-0.3
4	7.3	3	GND	3	-0.3
5	GND	4	1.2	4	-0.2
IC5002		5	6.7	5	GND
PIN	VOLT	**IC5005**		6	0.0
1	-0.1	PIN	VOLT	7	0.0
2	0.1	1	2.3	8	0.0
3	0.0	2	0.0	9	0.0
4	-0.1	3	2.3	10	0.0
5	2.2	**IC5006**		11	GND
6	2.3	PIN	VOLT	12	0.0
7	-0.1	I	9.8	13	N/C
8	5.0	O	5.0	14	0.3
IC5003		G	GND	15	0.3
PIN	VOLT			16	0.3
I	-9.0			17	N/C
O	-5.0			18	0.2
G	GND				

All voltages are in V.

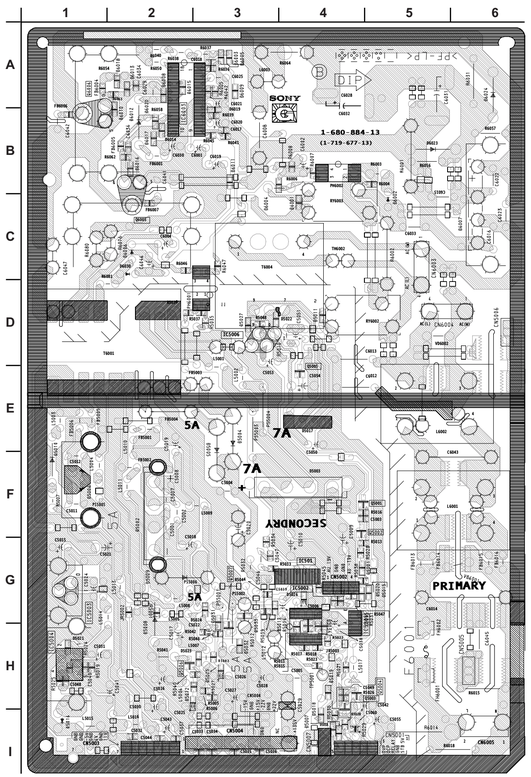
G BOARD TRANSISTOR VOLTAGE LIST

	B	C	E
Q5001	0.7	0	GND
Q5002	0.0	0.7	GND
Q5003	3.0	0.0	3.0
Q5004	0.0	3.0	GND
Q5005	22.3	9.1	22.8
Q5006	-15.0	0.0	-15.0
Q5007	6.2	0.1	6.2

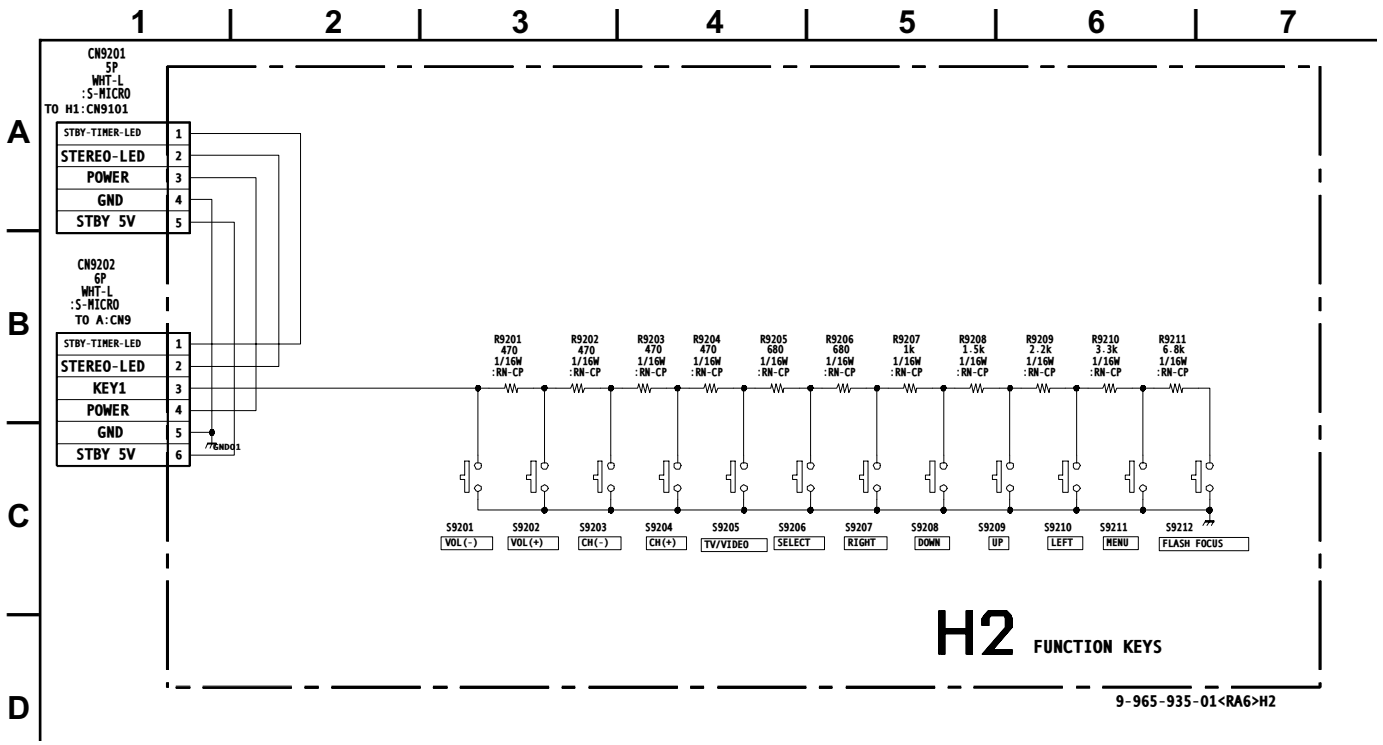
	D	G	S
Q6005	0.3	-0.1	GND
Q6006	0.3	0.3	0.3

All voltages are in V.

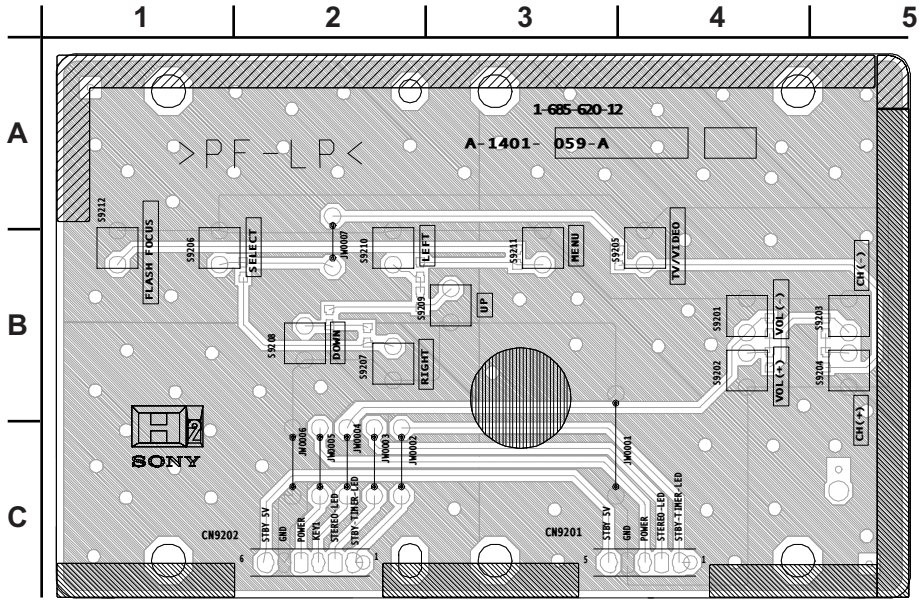
G [POWER SUPPLY] [COMPONENT SIDE]



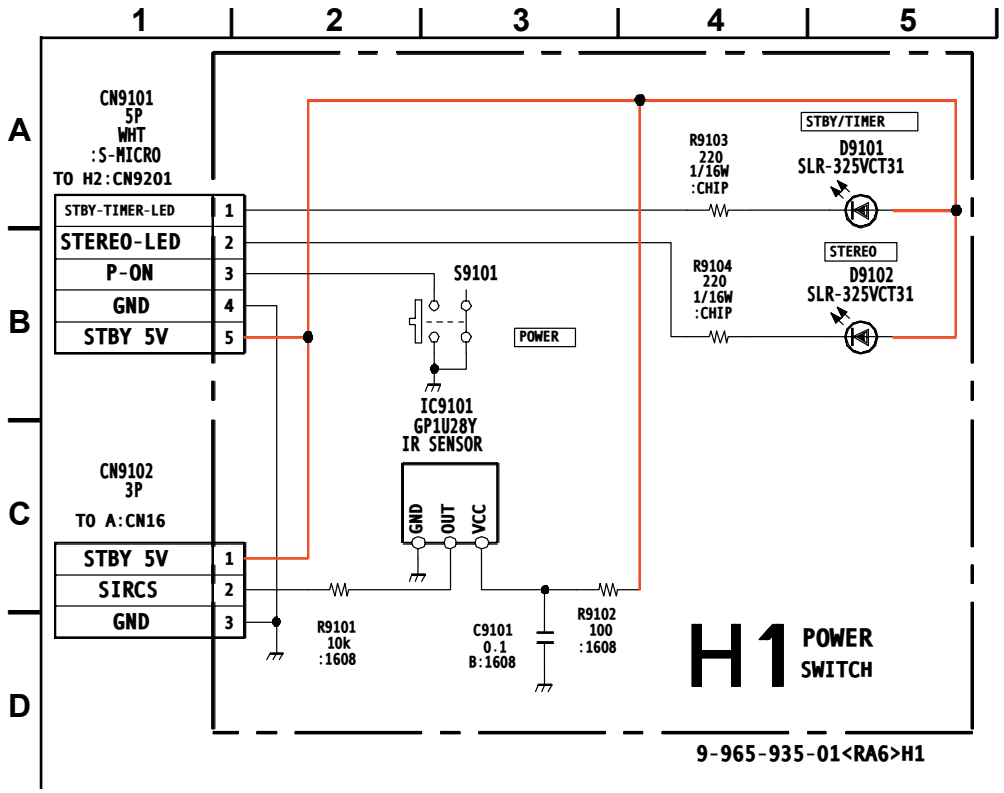
H2 BOARD SCHEMATIC DIAGRAM



H2 [FUNCTION KEYS] COMPONENT SIDE

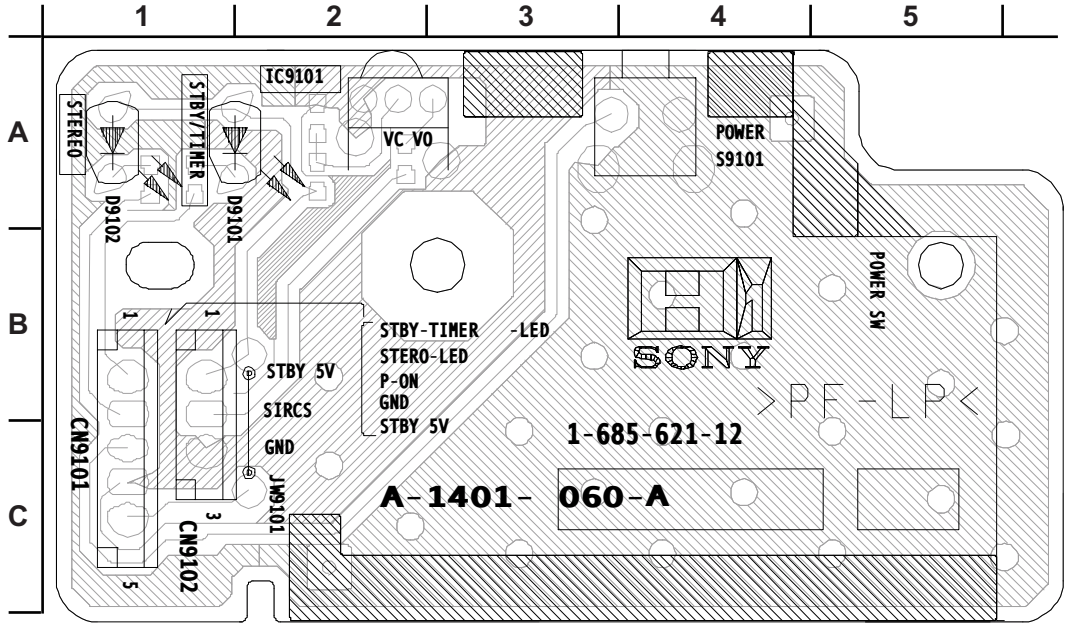


H1 BOARD SCHEMATIC DIAGRAM

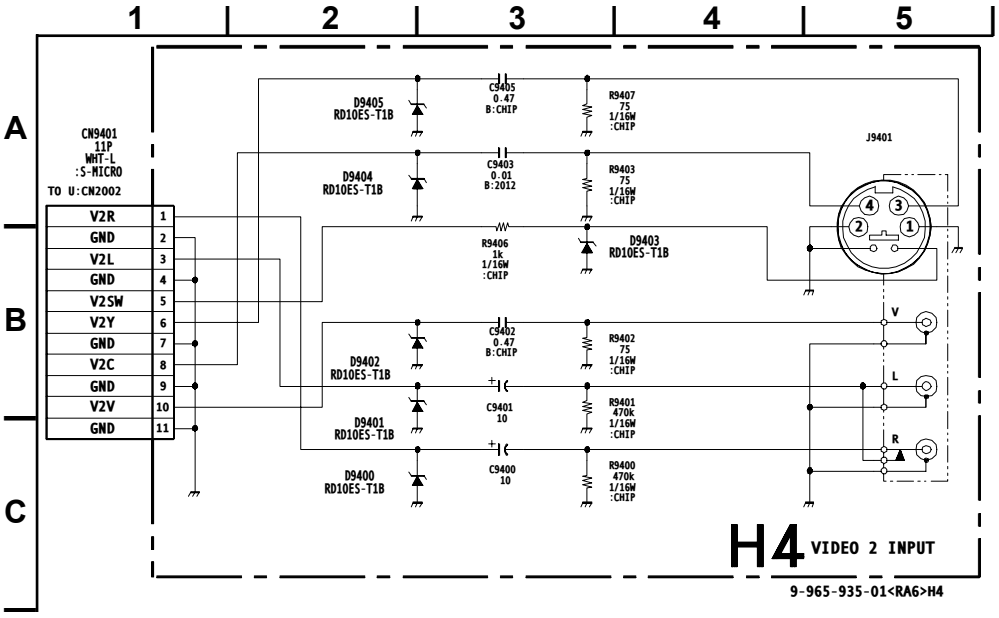


H1 [POWER SWITCH]

COMPONENT SIDE

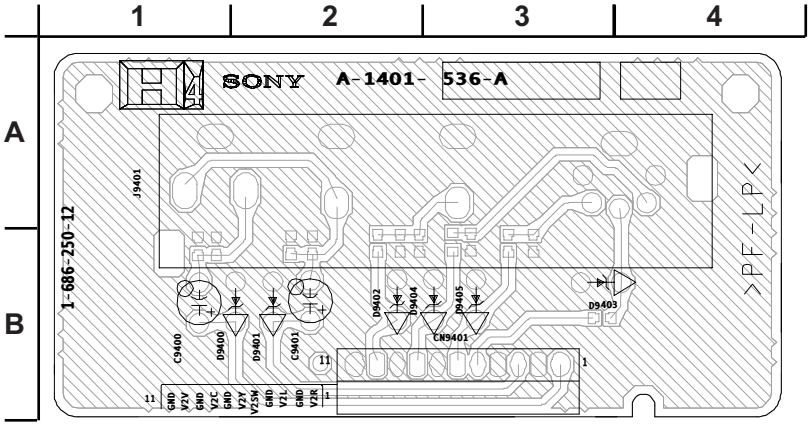


H4 BOARD SCHEMATIC DIAGRAM



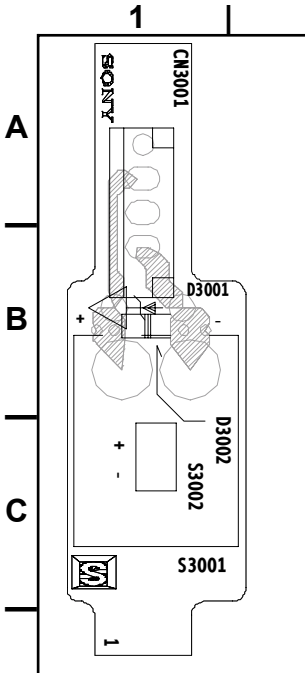
H4 [VIDEO 2 INPUT]

COMPONENT SIDE

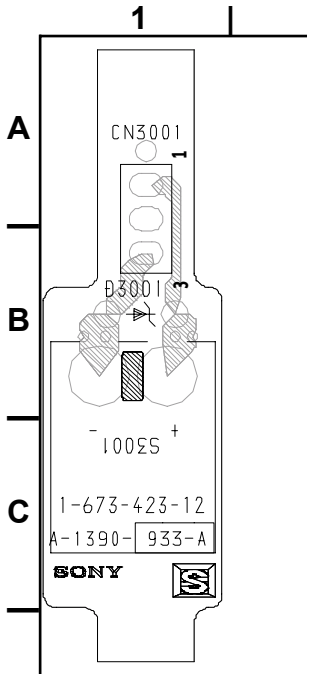


S [SENSOR]

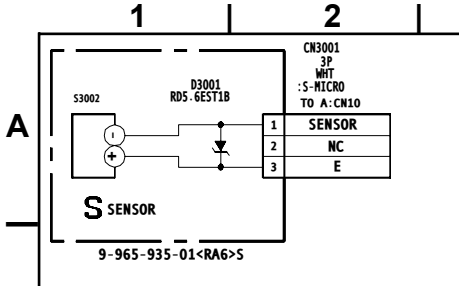
COMPONENT SIDE



CONDUCTOR SIDE

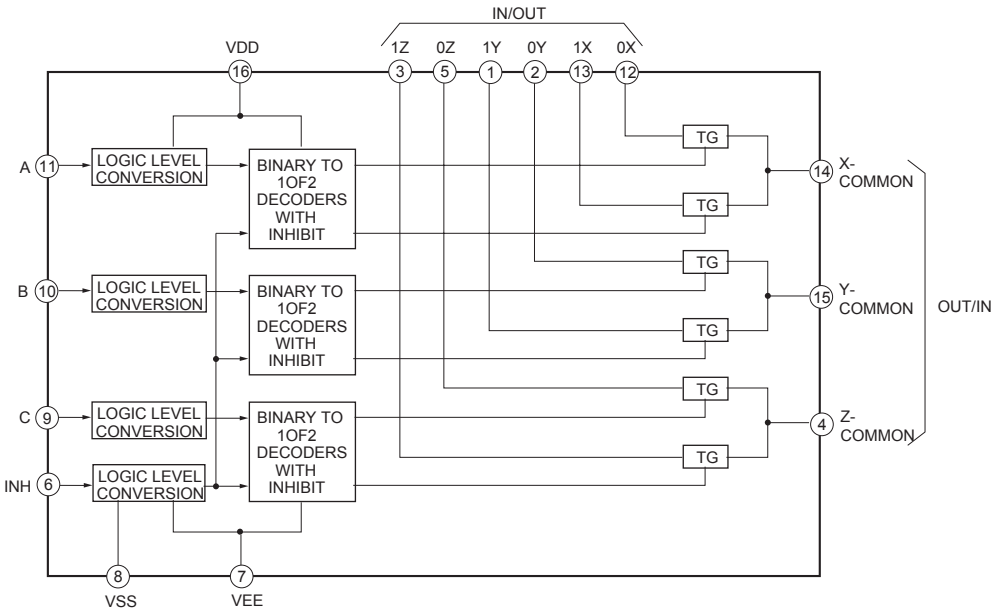


S BOARD SCHEMATIC DIAGRAM

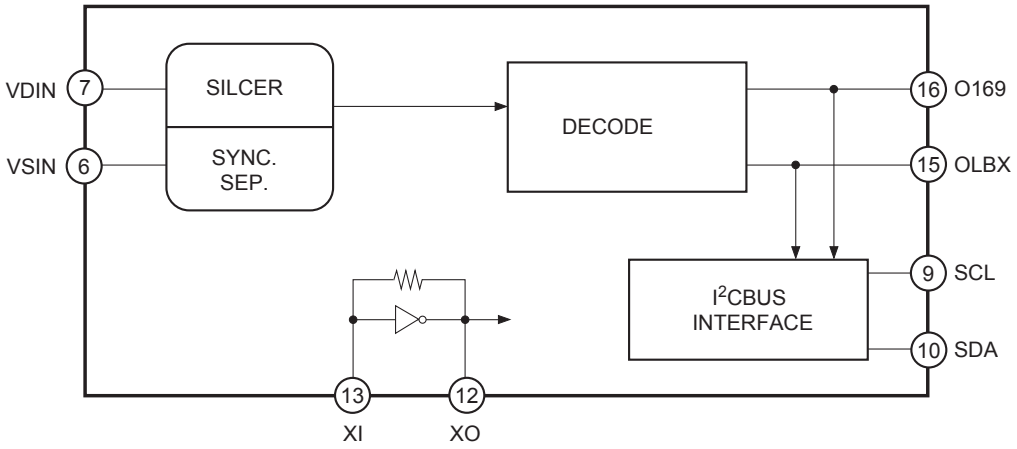


5-5. IC BLOCK DIAGRAMS

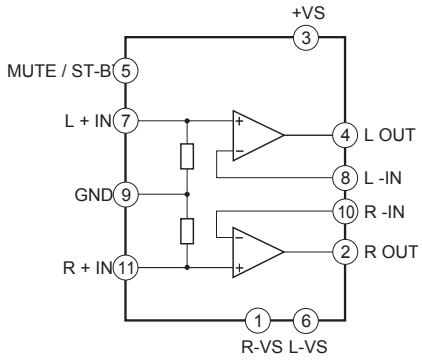
A BOARD: IC305, 307 SN74LV4053ANSR



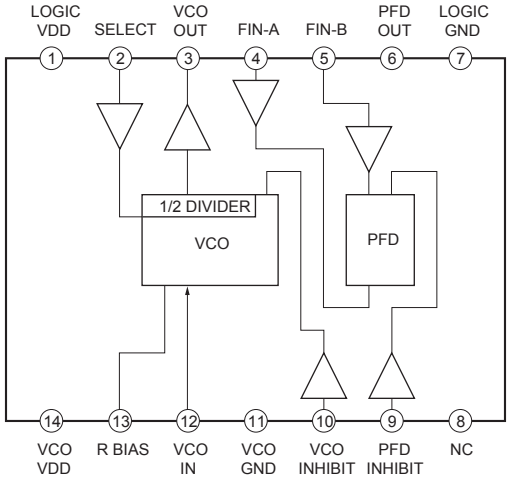
A BOARD: IC308 CXD2085M



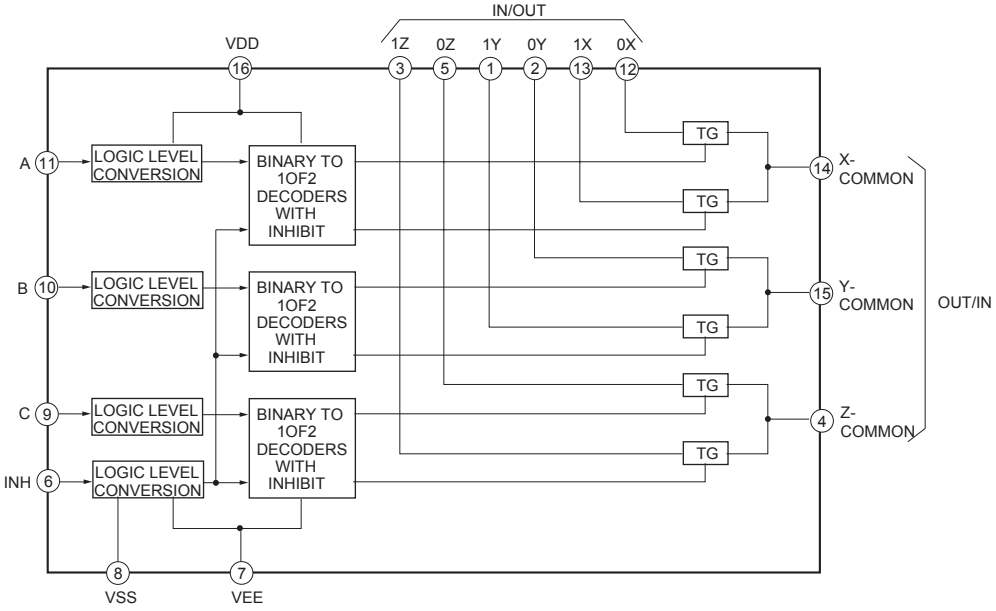
A BOARD: IC305, TDA7265



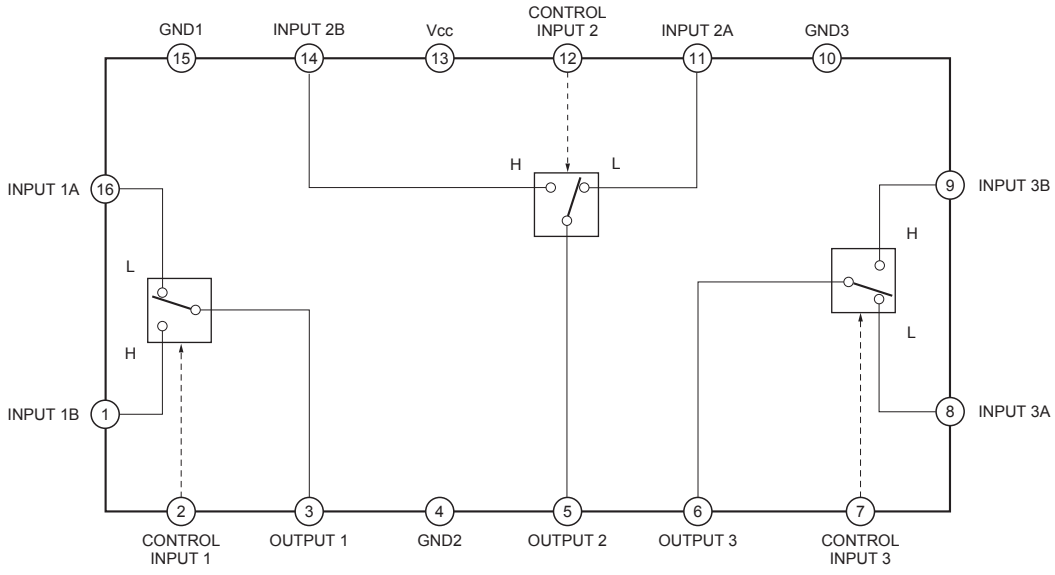
B BOARD: IC3305, 3404 TLC2932IPWR



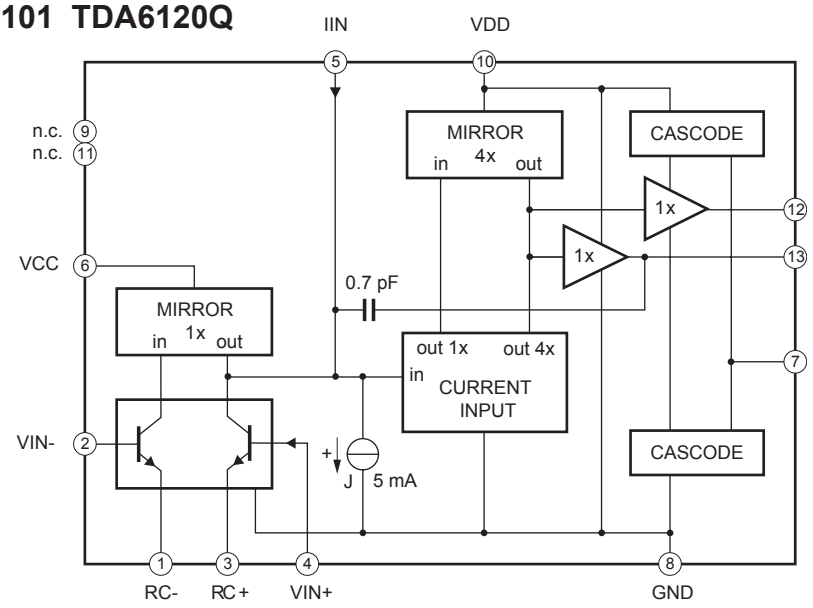
B BOARD: IC3413 SN74LV4053ANSR



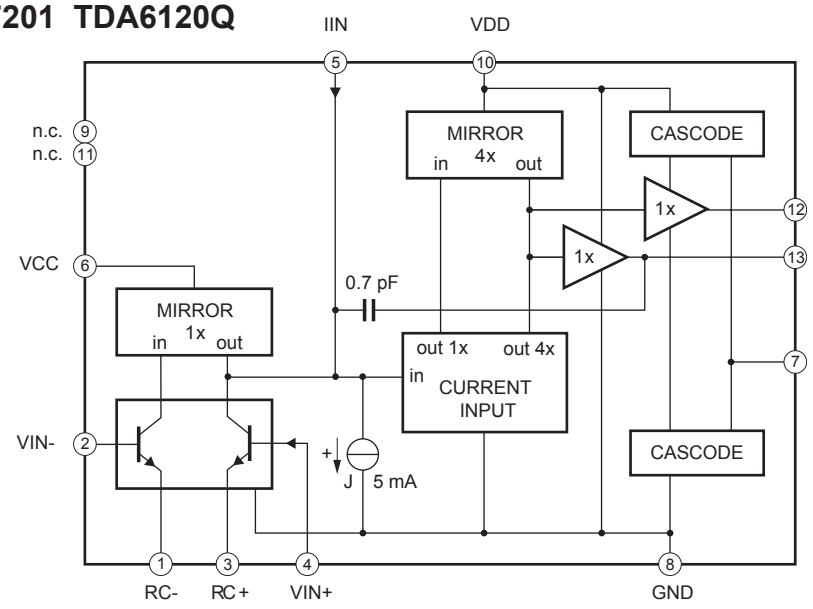
B BOARD: IC3414 M52055P



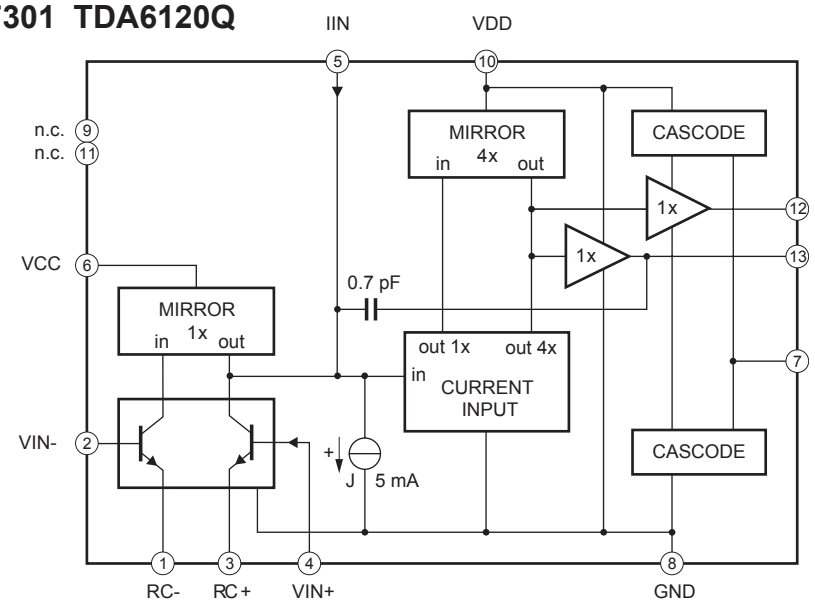
CR BOARD: IC7101 TDA6120Q



CG BOARD: IC7201 TDA6120Q



CB BOARD: IC7301 TDA6120Q



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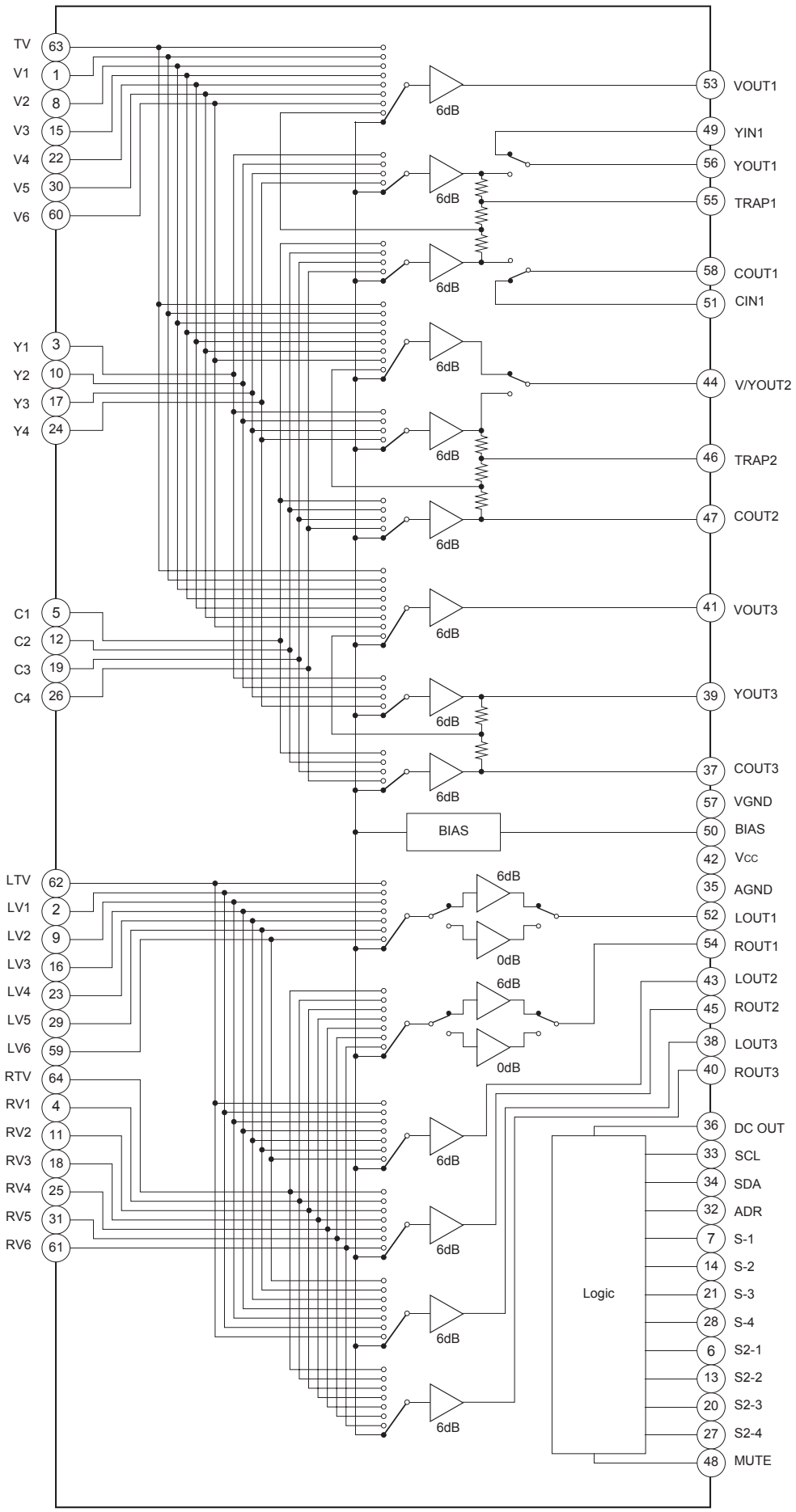

5-6. SEMICONDUCTORS

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GP08DPKG23
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RD18ES-B2
RD20ES-B2
RD5.6ES-B2
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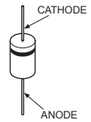

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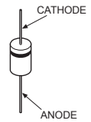

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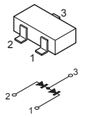

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UDZ-TE-17-10B
UDZS-TE-17-18B
UDZS-TE-17-22B
UDZS-TE-17-24B
UDZS-TE-17-3.9B
UDZS-TE-17-33B
UDZS-TE-17-4.7B
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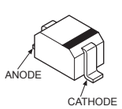
UDZS-TE-17-9.1B



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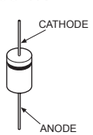

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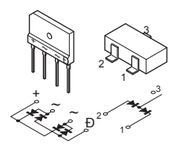

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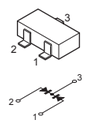

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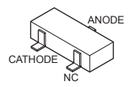

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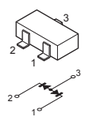

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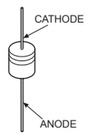

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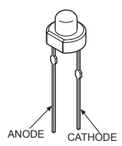

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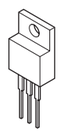

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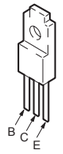

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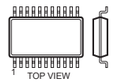

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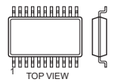

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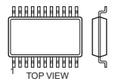

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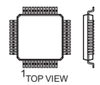

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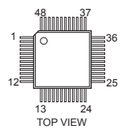

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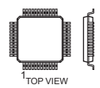

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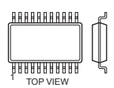

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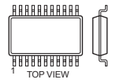

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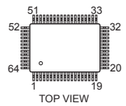

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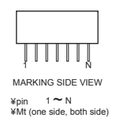

14pin DIP

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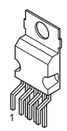

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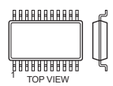

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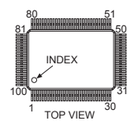

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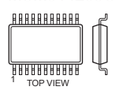

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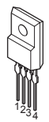

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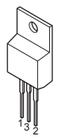

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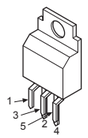

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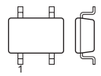

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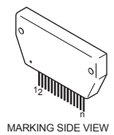

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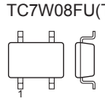

8pin CHIP

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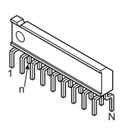

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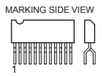

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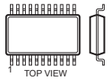

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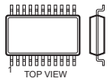

14pin SOP

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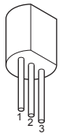

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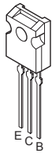

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DTC144EKA-T146

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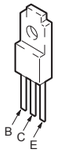

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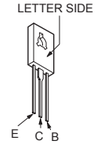

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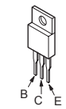

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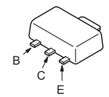

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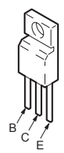


SECTION 6: EXPLODED VIEWS

Components not identified by a part number or description are not stocked because they are seldom required for routine service.

The component parts of an assembly are indicated by the reference numbers in the far right column of the parts list and within the dotted lines of the diagram.

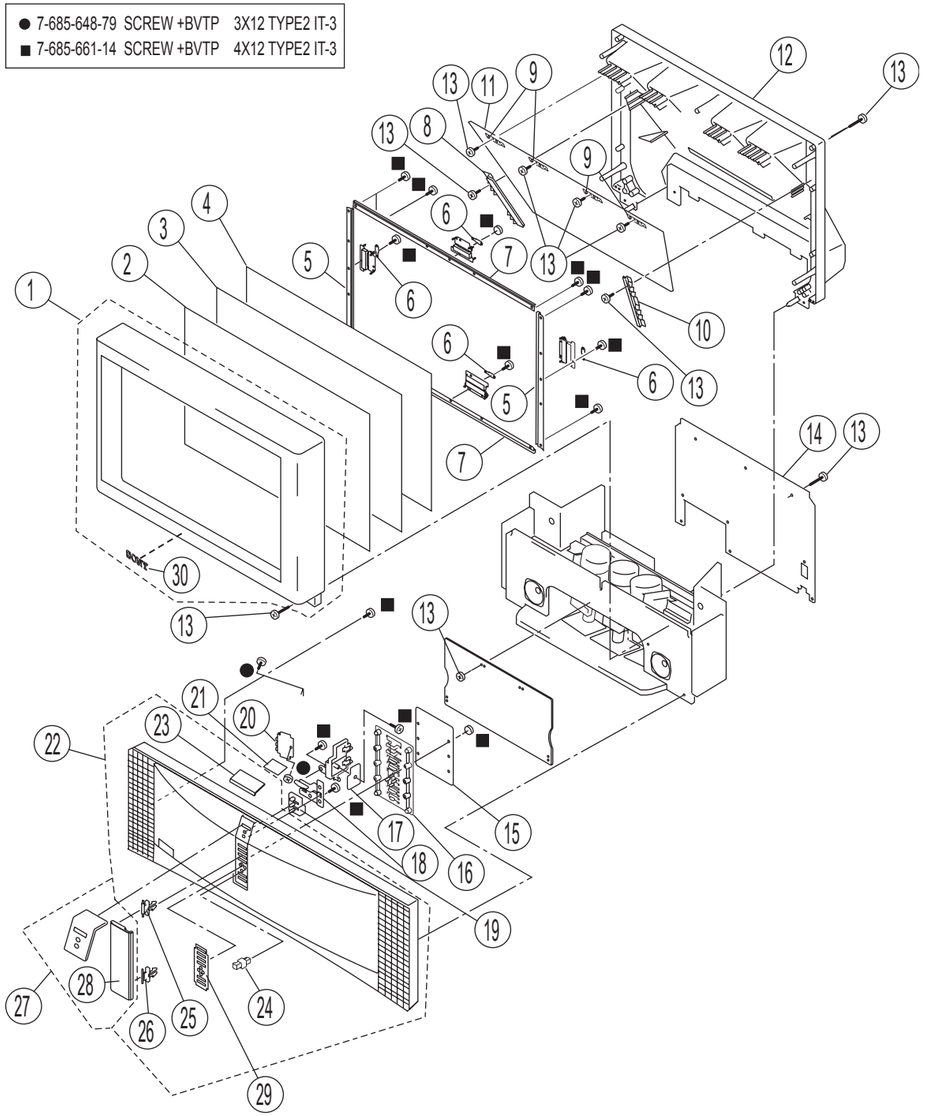
* Items marked with an asterisk are not stocked since they are seldom required for routine service. Expect some delay when ordering these components.

NOTE: The components identified by shading and ⚠ mark are critical for safety. Replace only with part number specified.

NOTE: Les composants identifies per un trame et une marque ⚠ sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

6-1. COVER

● 7-685-648-79 SCREW +BVTP 3X12 TYPE2 IT-3
■ 7-685-661-14 SCREW +BVTP 4X12 TYPE2 IT-3



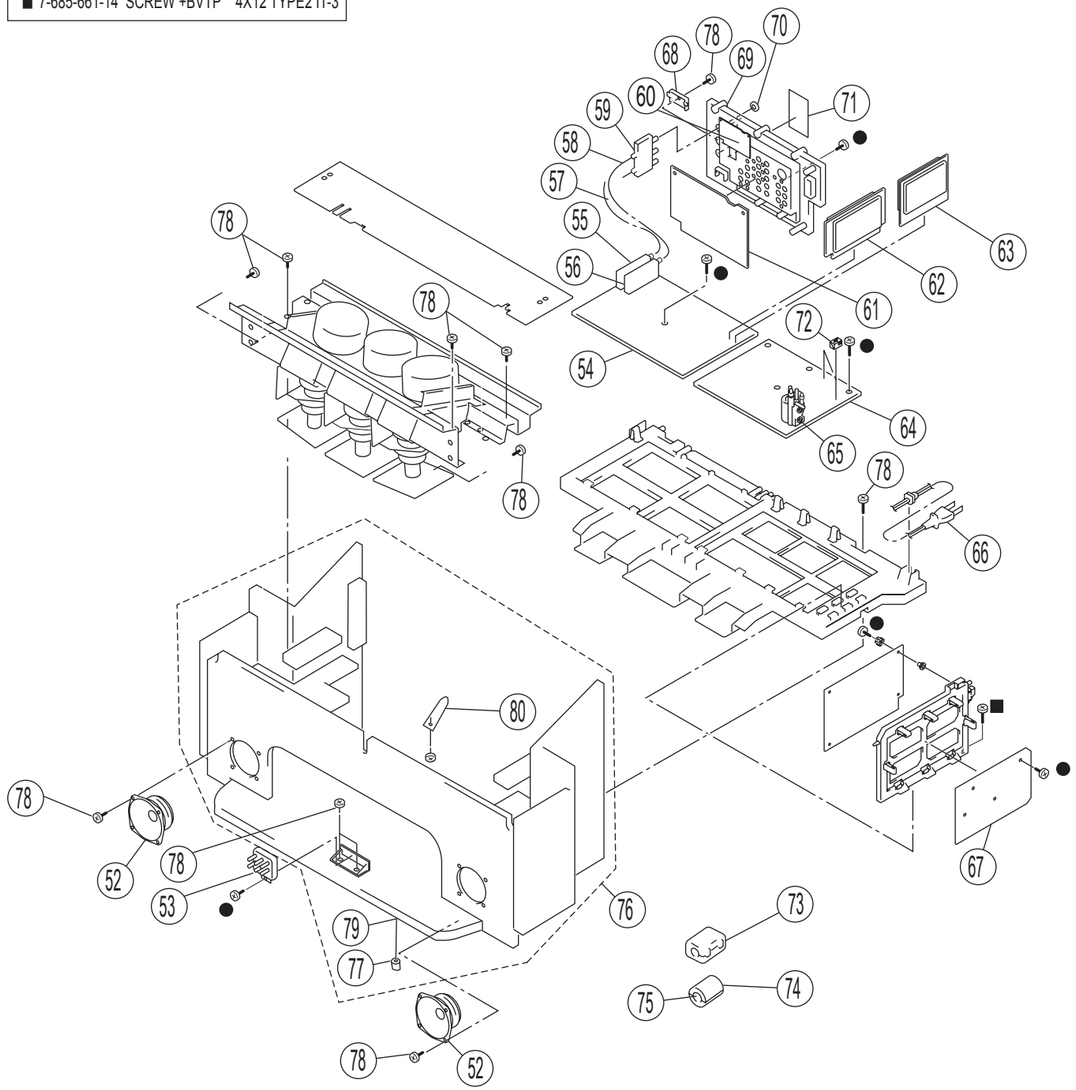
REF.NO.	PART NO.	DESCRIPTION	ASSEMBLY INCLUDES
1	X-4041-069-1	BEZNET (46) ASSY	(30)
2	4-090-943-11	SCREEN (46W), CONTRAST	
* 3	4-090-944-11	PLATE (46WL), DIFFUSION	
* 4	4-090-945-11	PLATE (46WF), DIFFUSION	
* 5	4-084-568-31	HOLDER, SCREEN	
* 6	A-1391-148-A	S BOARD, MOUNTED	
* 7	4-084-568-21	HOLDER, SCREEN	
8	4-091-245-01	HOLDER (46L), MIRROR	
* 9	4-081-501-01	HOLDER, MIRROR	
* 10	4-091-246-01	HOLDER (46R), MIRROR	
* 11	4-090-957-01	MIRROR (46)	
* 12	4-090-956-02	COVER (46), MIRROR	
13	4-081-063-01	SCREW, DOME WASHER HEX TAP 4X20	
14	4-090-950-01	BOARD, REAR	
15	A-1401-059-A	H2 BOARD, MOUNTED	
16	4-082-284-01	BUTTON, MULTI	
* 17	A-1401-060-A	H1 BOARD, MOUNTED	
18	4-082-283-01	BUTTON, POWER	
19	4-083-733-01	GUIDE (HW), LED	
20	A-1401-536-A	H4 BOARD, MOUNTED	
21	4-082-291-03	LABEL, CONTROL	
22	X-4041-068-1	GRILLE ASSY, SPEAKER (46)	(23-26)
23	4-090-952-01	DOOR, TERMINAL	
24	4-042-192-01	CATCHER, PUSH	
25	4-045-250-01	DAMPER	
26	3-703-035-11	SHAFT, LID	
* 27	4-092-070-01	PANEL ASSY, FRONT	(28)
* 28	4-090-954-01	DOOR, CONTROL	
29	4-082-291-03	LABEL, CONTROL	
30	3-704-179-81	EMBLEM (NO.9), SONY	

NOTE: The components identified by shading and ⚠ mark are critical for safety. Replace only with part number specified.

NOTE: Les composants identifies per un trame et une marque ⚠ sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

6-2. CHASSIS

● 7-685-648-79 SCREW +BVTP 3X12 TYPE2 IT-3
■ 7-685-661-14 SCREW +BVTP 4X12 TYPE2 IT-3



REF.NO.	PART NO.	DESCRIPTION
52	1-544-893-21	SPEAKER (10CM)
⚠* 53	1-223-925-11	RESISTOR ASSY (HIGH-VOLTAGE)
* 54	A-1300-550-A	A BOARD, COMPLETE
55	8-598-593-20	TUNER, FSS BTF-WA421
56	8-598-594-10	TUNER, FSS BTF-FA421
* 57	1-557-056-31	CABLE, P-P
* 58	1-556-945-21	CABLE, P-P
⚠ 59	1-771-787-13	SWITCH, RF ANTENNA
60	A-1300-324-A	UD BOARD, COMPLETE
61	A-1300-551-A	U BOARD, COMPLETE
62	A-1136-271-A	B BOARD, COMPLETE
63	A-1299-523-A	AD BOARD, COMPLETE
⚠* 64	A-1300-417-A	D BOARD, COMPLETE
	The high voltage leads associated with the FBT on the D Board are not included and must be ordered separately.	
⚠ 65	1-453-285-41	FBT ASSY NX-4006//4P4
⚠ 65	1-900-260-40	CONNECTOR ASSY, MV
⚠* 65	1-779-095-51	LEAD ASSY, HIGH-VOLTAGE

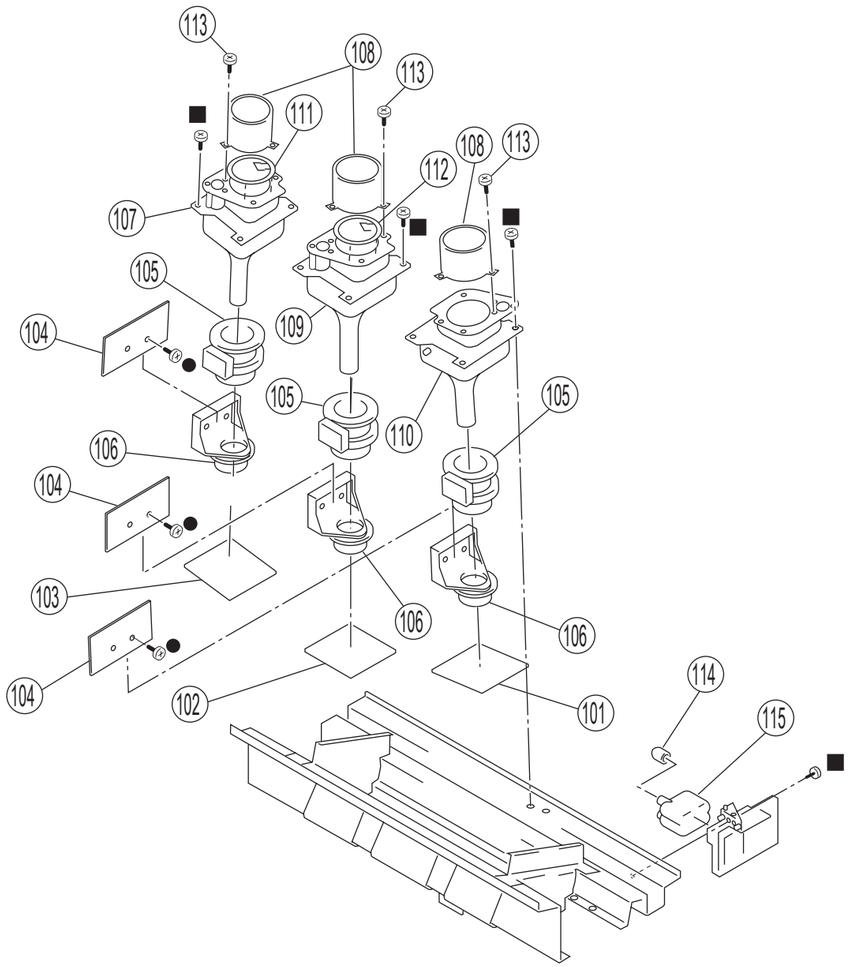
REF.NO.	PART NO.	DESCRIPTION	ASSEMBLY INCLUDES
⚠ 66	1-790-001-22	CORD, AC POWER (WITH CONNECTOR	
* 67	A-1316-566-A	G BOARD, COMPLETE	
* 68	4-069-675-01	CAP, TERMINAL BOARD	
* 69	4-089-438-01	BOARD, TERMINAL	
70	4-635-966-01	SCREW (HEX)	
71	4-089-194-01	LABEL, TERMINAL	
72	3-710-578-01	COVER, VOLUME, 6 MOLD	
73	1-500-603-11	CLAMP, FERRITE	
74	1-500-082-11	CLAMP, SLEEVE FERRITE	
75	1-469-241-11	CORE, FERRITE (RFC-8 BK)	
76	X-4041-067-1	CABINET (46) ASSY, BOTTOM	(77 & 79-80)
77	4-084-920-01	FOOT	
78	4-081-063-01	SCREW, DOME WASHER HEX TAP 4X20	
79	4-084-932-21	CATCH (S)	
80	4-084-922-01	STRAP, SAFETY	

NOTE: The components identified by shading and ⚠ mark are critical for safety. Replace only with part number specified.

NOTE: Les composants identifies per un trame et une marque ⚠ sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

6-3. PICTURE TUBE

■ 7-685-663-71 SCREW +BVTP 4X16 TYPE2 IT-3



REF.NO.	PART NO.	DESCRIPTION
101	A-1401-058-A	CB BOARD, MOUNTED
102	A-1401-057-A	CG BOARD, MOUNTED
103	A-1401-056-A	CR BOARD, MOUNTED
104	A-1342-598-A	V BOARD, MOUNTED
⚠ 105	1-451-537-22	DEFLECTION YOKE
⚠ 106	1-452-790-31	NECK ASSY
⚠ 107	8-733-657-15	CRT 07MVC21(R)-L(FL)
108	4-083-751-01	LENS (DELTA 250)
⚠ 109	8-733-652-15	CRT 07MVC21(G)-L(FL)
⚠ 110	8-733-656-25	CRT 07MVC21(B)-L(FLG)
* 111	4-092-690-01	SHADE (R)
112	4-092-691-01	SHADE (G)
113	4-081-063-01	SCREW,DOME WASHER HEX TAP 4X20
* 114	4-373-137-01	CAP (Z), RUBBER
⚠ 115	8-598-955-32	BLOCK ASSY, HV HVB-1031

SECTION 7: ELECTRICAL PARTS LIST

NOTE: The components identified by shading and ⚠ mark are critical for safety. Replace only with part number specified.

NOTE: Les composants identifies per un trame et une marque ⚠ sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

The components in this manual identified by the following symbol: ⋈ indicate parts that have been carefully factory-selected to satisfy regulations regarding X-ray radiation for each set.

Should replacement be required for one of these components, replace only with the value originally used.

*** Items marked with an asterisk are not stocked since they are seldom required for routine service. Expect some delay when ordering these components.**

V

RESISTORS
- **All resistors are in ohms**
- **F : nonflammable**
- **All variable and adjustable resistors have characteristic curve B, unless otherwise noted.**

When ordering parts by reference number, please include the board name.

REF. NO.	PART NO.	DESCRIPTION	VALUES		
V					
*	**A-1342-598-A**	**V BOARD, MOUNTED**			
	4-382-854-11	SCREW (M3X10), P, SW (+)			
*	7-651-000-50	GREASE,SILICON (G-746) 200G			
		CAPACITOR			
C9002	1-104-999-11	MYLAR	0.1µF	5%	200V
C9003	1-125-891-11	CERAMIC CHIP	0.47µF	10%	10V
C9006	1-126-935-11	ELECT	470µF	20%	16V
C9007	1-126-933-11	ELECT	100µF	20%	16V
C9008	1-126-935-11	ELECT	470µF	20%	16V
C9009	1-126-933-11	ELECT	100µF	20%	16V
C9010	1-107-667-11	ELECT	2.2µF	20%	400V
C9011	1-107-364-11	MYLAR	0.01µF	10%	200V
C9012	1-107-364-11	MYLAR	0.01µF	10%	200V
C9013	1-162-964-11	CERAMIC CHIP	0.001µF	10%	50V
C9014	1-162-964-11	CERAMIC CHIP	0.001µF	10%	50V
C9015	1-126-935-11	ELECT	470µF	20%	16V
C9017	1-104-999-11	MYLAR	0.1µF	5%	200V
C9018	1-107-638-11	ELECT	33µF	20%	160V
C9019	1-126-935-11	ELECT	470µF	20%	16V
		CONNECTOR			
* CN9001	1-564-508-11	PLUG, CONNECTOR	5P		
* CN9002	1-770-723-11	CONNECTOR, BOARD TO BOARD	8P		
		DIODE			
D9001	8-719-988-61	DIODE	1SS355TE-17		
D9002	8-719-988-61	DIODE	1SS355TE-17		
D9003	8-719-988-61	DIODE	1SS355TE-17		
D9004	8-719-988-61	DIODE	1SS355TE-17		
D9005	8-719-510-02	DIODE	D1NS4		
D9006	8-719-110-56	DIODE	RD22ESB1		
D9007	8-719-110-56	DIODE	RD22ESB1		

REF. NO.	PART NO.	DESCRIPTION	VALUES		
		COIL			
L9001	1-412-525-31	INDUCTOR	10µH		
		TRANSISTOR			
Q9002	8-729-120-28	TRANSISTOR	2SC1623-L5L6		
Q9003	8-729-120-28	TRANSISTOR	2SC1623-L5L6		
Q9004	8-729-026-49	TRANSISTOR	2SA1037AK-T146-R		
Q9005	8-729-120-28	TRANSISTOR	2SC1623-L5L6		
Q9006	8-729-026-49	TRANSISTOR	2SA1037AK-T146-R		
Q9007	8-729-120-28	TRANSISTOR	2SC1623-L5L6		
Q9008	8-729-045-04	TRANSISTOR	2SC5511		
Q9009	8-729-045-05	TRANSISTOR	2SA2005		
		RESISTOR			
R9002	1-216-805-11	METAL CHIP	47	5%	1/10W
R9004	1-216-820-11	METAL CHIP	820	5%	1/10W
R9005	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R9006	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R9007	1-216-809-11	METAL CHIP	100	5%	1/10W
R9008	1-216-803-11	METAL CHIP	33	5%	1/10W
R9009	1-216-809-11	METAL CHIP	100	5%	1/10W
R9010	1-216-813-11	METAL CHIP	220	5%	1/10W
R9011	1-216-864-11	SHORT CHIP			
R9012	1-216-823-11	METAL CHIP	1.5K	5%	1/10W
R9013	1-216-805-11	METAL CHIP	47	5%	1/10W
R9014	1-216-805-11	METAL CHIP	47	5%	1/10W
R9015	1-216-833-11	METAL CHIP	10K	5%	1/10W
R9016	1-249-414-11	CARBON	560	5%	1/4W
R9017	1-249-435-11	CARBON	33K	5%	1/4W
R9018	1-249-435-11	CARBON	33K	5%	1/4W
R9019	1-249-414-11	CARBON	560	5%	1/4W
R9020	1-216-799-11	METAL CHIP	15	5%	1/10W
R9021	1-216-799-11	METAL CHIP	15	5%	1/10W
R9022	1-249-421-11	CARBON	2.2K	5%	1/4W

NOTE: The components identified by shading and ⚠ mark are critical for safety. Replace only with part number specified.

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V CR

REF. NO.	PART NO.	DESCRIPTION	VALUES		
R9023	1-249-421-11	CARBON	2.2K	5%	1/4W
R9024	1-249-405-11	CARBON	100	5%	1/4W
R9025	1-249-385-11	CARBON	2.2	5%	1/4W
R9027	1-249-385-11	CARBON	2.2	5%	1/4W
R9028	1-249-405-11	CARBON	100	5%	1/4W
R9029	1-215-913-11	METAL OXIDE	220	5%	3W
R9030	1-249-377-11	CARBON	0.47	5%	1/4W
R9031	1-249-385-11	CARBON	2.2	5%	1/4W
R9032	1-249-385-11	CARBON	2.2	5%	1/4W
R9033	1-249-436-11	CARBON	39K	5%	1/4W
R9034	1-249-436-11	CARBON	39K	5%	1/4W

CR

*	**A-1401-056-A**	**CR BOARD, MOUNTED**	
	4-382-854-11	SCREW (M3X10), P, SW (+)	
*	7-651-000-50	GREASE,SILICON (G-746) 200G	
	CAPACITOR		
C7101	1-164-156-11	CERAMIC CHIP	0.1µF 25V
C7102	1-101-003-00	CERAMIC	0.0047µF 50V
C7103	1-104-570-11	CERAMIC	0.001µF 10% 2KV
C7104	1-107-662-11	ELECT	22µF 20% 350V
C7105	1-162-918-11	CERAMIC CHIP	18pF 5% 50V
C7106	1-126-768-11	ELECT	2200µF 20% 16V
C7107	1-161-830-00	CERAMIC	0.0047µF 500V
C7108	1-101-003-00	CERAMIC	0.0047µF 50V
C7109	1-164-156-11	CERAMIC CHIP	0.1µF 25V
C7110	1-164-156-11	CERAMIC CHIP	0.1µF 25V
C7111	1-126-933-11	ELECT	100µF 20% 16V
C7112	1-164-156-11	CERAMIC CHIP	0.1µF 25V
C7113	1-101-003-00	CERAMIC	0.0047µF 50V
C7114	1-162-966-11	CERAMIC CHIP	0.0022µF 10% 50V
	CONNECTOR		
* CN7102	1-564-509-11	PLUG, CONNECTOR	6P
* CN7103	1-564-510-11	PLUG, CONNECTOR	7P
CN7104	1-785-879-11	CONNECTOR, ONE TOUCH	
CN7105	1-695-915-11	TAB (CONTACT)	
CN7107	1-695-915-11	TAB (CONTACT)	
⚠ CN7108	1-251-182-11	SOCKET, CRT	

REF. NO.	PART NO.	DESCRIPTION	VALUES		
	DIODE				
D7101	8-719-404-50	DIODE	MA111-TX		
D7102	8-719-901-83	DIODE	1SS83		
D7103	8-719-901-83	DIODE	1SS83		
	IC				
IC7101	8-759-680-01	IC	TDA6120Q/N2/S1		
	JUMPER WIRE				
JW7104	1-216-864-11	SHORT CHIP			
	COIL				
L7101	1-469-555-21	INDUCTOR	10µH		
L7102	1-414-855-31	INDUCTOR	1µH		
L7103	1-414-855-31	INDUCTOR	1µH		
	TRANSISTOR				
Q7101	8-729-424-02	TRANSISTOR	2SB709A-QRS-TX		
Q7102	8-729-422-27	TRANSISTOR	2SD601A-Q		
Q7103	8-729-048-50	TRANSISTOR	2SK3018-T106		
	RESISTOR				
R7101	1-260-132-11	CARBON	560K	5%	1/2W
R7102	1-216-813-11	METAL CHIP	220	5%	1/10W
R7103	1-218-693-11	METAL CHIP	1.1K	0.50%	1/10W
R7104	1-218-696-11	METAL CHIP	1.5K	0.50%	1/10W
R7105	1-219-743-11	METAL	100	5%	1/2W
R7106	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R7107	1-260-133-11	CARBON	680K	5%	1/2W
R7108	1-218-692-11	METAL CHIP	1K	0.50%	1/10W
R7109	1-216-815-11	METAL CHIP	330	5%	1/10W
R7110	1-218-703-11	METAL CHIP	3K	0.50%	1/10W
R7111	1-218-710-11	METAL CHIP	5.6K	0.50%	1/10W
R7112	1-218-746-11	METAL CHIP	180K	0.50%	1/10W
R7113	1-218-746-11	METAL CHIP	180K	0.50%	1/10W
R7114	1-215-925-11	METAL OXIDE	22K	5%	3W
R7115	1-260-328-11	CARBON	1K	5%	1/2W
R7116	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R7118	1-216-823-11	METAL CHIP	1.5K	5%	1/10W
R7119	1-260-320-11	CARBON	220	5%	1/2W
R7120	1-218-710-11	METAL CHIP	5.6K	0.50%	1/10W
R7121	1-249-425-11	CARBON	4.7K	5%	1/4W
R7122	1-260-087-11	CARBON	100	5%	1/2W

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CR CG

REF. NO.	PART NO.	DESCRIPTION	VALUES
	SPARK GAP		
SG7101	1-519-422-11	GAP, SPARK	
SG7102	1-517-729-31	GAP, SPARK	
SG7103	1-519-421-11	GAP, DISCHARGE	

CG

*	**A-1401-057-A**	**CG BOARD, MOUNTED**	
	4-382-854-11	SCREW (M3X10), P, SW (+)	
*	7-651-000-50	GREASE,SILICON (G-746) 200G	
	CAPACITOR		
C7201	1-164-156-11	CERAMIC CHIP	0.1µF 25V
C7202	1-101-003-00	CERAMIC	0.0047µF 50V
C7203	1-104-570-11	CERAMIC	0.001µF 10% 2KV
C7204	1-107-662-11	ELECT	22µF 20% 350V
C7205	1-162-920-11	CERAMIC CHIP	27pF 5% 50V
C7206	1-101-003-00	CERAMIC	0.0047µF 50V
C7207	1-126-768-11	ELECT	2200µF 20% 16V
C7208	1-164-156-11	CERAMIC CHIP	0.1µF 25V
C7209	1-164-156-11	CERAMIC CHIP	0.1µF 25V
C7210	1-126-933-11	ELECT	100µF 20% 16V
C7211	1-164-156-11	CERAMIC CHIP	0.1µF 25V
C7212	1-161-830-00	CERAMIC	0.0047µF 500V
C7213	1-101-003-00	CERAMIC	0.0047µF 50V
C7214	1-162-966-11	CERAMIC CHIP	0.0022µF 10% 50V
	CONNECTOR		
* CN7202	1-564-509-11	PLUG, CONNECTOR	6P
* CN7203	1-564-510-11	PLUG, CONNECTOR	7P
* CN7204	1-564-510-11	PLUG, CONNECTOR	7P
CN7205	1-785-879-11	CONNECTOR, ONE TOUCH	
CN7206	1-695-915-11	TAB (CONTACT)	
CN7208	1-695-915-11	TAB (CONTACT)	
⚠ CN7209	1-251-182-11	SOCKET, CRT	
	DIODE		
D7201	8-719-404-50	DIODE	MA111-TX
D7202	8-719-901-83	DIODE	1SS83
D7203	8-719-901-83	DIODE	1SS83
	IC		
IC7201	8-759-680-01	IC	TDA6120Q/N2/S1

REF. NO.	PART NO.	DESCRIPTION	VALUES
	JUMPER WIRE		
JW7214	1-216-864-11	SHORT CHIP	
	COIL		
L7201	1-469-555-21	INDUCTOR	10µH
L7202	1-414-855-31	INDUCTOR	1µH
L7203	1-414-855-31	INDUCTOR	1µH
	TRANSISTOR		
Q7201	8-729-424-02	TRANSISTOR	2SB709A-QRS-TX
Q7202	8-729-422-27	TRANSISTOR	2SD601A-Q
Q7203	8-729-048-50	TRANSISTOR	2SK3018-T106
	RESISTOR		
R7201	1-216-813-11	METAL CHIP	220 5% 1/10W
R7202	1-218-693-11	METAL CHIP	1.1K 0.50% 1/10W
R7203	1-218-696-11	METAL CHIP	1.5K 0.50% 1/10W
R7204	1-260-132-11	CARBON	560K 5% 1/2W
R7205	1-216-825-11	METAL CHIP	2.2K 5% 1/10W
R7206	1-219-743-11	METAL	100 5% 1/2W
R7207	1-218-690-11	METAL CHIP	820 0.50% 1/10W
R7208	1-260-133-11	CARBON	680K 5% 1/2W
R7209	1-216-815-11	METAL CHIP	330 5% 1/10W
R7210	1-218-700-11	METAL CHIP	2.2K 0.50% 1/10W
R7211	1-218-708-11	METAL CHIP	4.7K 0.50% 1/10W
R7212	1-218-742-11	METAL CHIP	120K 0.50% 1/10W
R7213	1-218-742-11	METAL CHIP	120K 0.50% 1/10W
R7214	1-215-925-11	METAL OXIDE	22K 5% 3W
R7215	1-216-829-11	METAL CHIP	4.7K 5% 1/10W
R7216	1-216-823-11	METAL CHIP	1.5K 5% 1/10W
R7217	1-260-328-11	CARBON	1K 5% 1/2W
R7219	1-260-320-11	CARBON	220 5% 1/2W
R7220	1-218-710-11	METAL CHIP	5.6K 0.50% 1/10W
R7221	1-249-425-11	CARBON	4.7K 5% 1/4W
R7222	1-260-087-11	CARBON	100 5% 1/2W
	SPARK GAP		
SG7201	1-519-422-11	GAP, SPARK	
SG7202	1-517-729-31	GAP, SPARK	
SG7203	1-519-421-11	GAP, DISCHARGE	

NOTE: The components identified by shading and ⚠ mark are critical for safety. Replace only with part number specified.

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CB

CB

	REF. NO.	PART NO.	DESCRIPTION	VALUES		
*		A-1401-058-A	CB BOARD, MOUNTED			
		4-382-854-11	SCREW (M3X10), P, SW (+)			
*		7-651-000-50	GREASE,SILICON (G-746) 200G			
		CAPACITOR				
	C7301	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
	C7302	1-162-919-11	CERAMIC CHIP	22pF	5%	50V
	C7303	1-162-919-11	CERAMIC CHIP	22pF	5%	50V
	C7304	1-101-003-00	CERAMIC	0.0047µF		50V
	C7305	1-104-570-11	CERAMIC	0.001µF	10%	2KV
	C7306	1-126-768-11	ELECT	2200µF	20%	16V
	C7307	1-164-156-11	CERAMIC CHIP	0.1µF		25V
	C7308	1-107-662-11	ELECT	22µF	20%	350V
	C7309	1-101-003-00	CERAMIC	0.0047µF		50V
	C7310	1-164-156-11	CERAMIC CHIP	0.1µF		25V
	C7311	1-164-156-11	CERAMIC CHIP	0.1µF		25V
	C7312	1-126-933-11	ELECT	100µF	20%	16V
	C7313	1-164-156-11	CERAMIC CHIP	0.1µF		25V
	C7314	1-164-156-11	CERAMIC CHIP	0.1µF		25V
	C7315	1-161-830-00	CERAMIC	0.0047µF		500V
	C7316	1-101-003-00	CERAMIC	0.0047µF		50V
	C7317	1-162-966-11	CERAMIC CHIP	0.0022µF	10%	50V
		CONNECTOR				
*	CN7302	1-564-509-11	PLUG, CONNECTOR	6P		
*	CN7303	1-564-510-11	PLUG, CONNECTOR	7P		
*	CN7304	1-564-510-11	PLUG, CONNECTOR	7P		
	CN7305	1-785-879-11	CONNECTOR, ONE TOUCH			
	CN7307	1-695-915-11	TAB (CONTACT)			
	CN7308	1-695-915-11	TAB (CONTACT)			
⚠	CN7309	1-251-182-11	SOCKET, CRT			
		DIODE				
	D7301	8-719-404-50	DIODE	MA111-TX		
	D7302	8-719-404-50	DIODE	MA111-TX		
	D7303	8-719-901-83	DIODE	1SS83		
	D7304	8-719-901-83	DIODE	1SS83		
		IC				
	IC7301	8-759-680-01	IC	TDA6120Q/N2/S1		

REF. NO.	PART NO.	DESCRIPTION	VALUES		
	JUMPER WIRE				
JW7302	1-216-864-11	SHORT CHIP			
JW7304	1-216-864-11	SHORT CHIP			
JW7305	1-216-864-11	SHORT CHIP			
	COIL				
L7301	1-469-555-21	INDUCTOR	10µH		
L7302	1-414-855-31	INDUCTOR	1µH		
L7303	1-414-855-31	INDUCTOR	1µH		
	TRANSISTOR				
Q7301	8-729-424-02	TRANSISTOR	2SB709A-QRS-TX		
Q7302	8-729-424-02	TRANSISTOR	2SB709A-QRS-TX		
Q7303	8-729-422-27	TRANSISTOR	2SD601A-Q		
Q7304	8-729-048-50	TRANSISTOR	2SK3018-T106		
	RESISTOR				
R7301	1-249-393-11	CARBON	10	5%	1/4W
R7302	1-216-822-11	METAL CHIP	1.2K	5%	1/10W
R7303	1-216-813-11	METAL CHIP	220	5%	1/10W
R7304	1-260-132-11	CARBON	560K	5%	1/2W
R7305	1-216-801-11	METAL CHIP	22	5%	1/10W
R7306	1-218-699-11	METAL CHIP	2K	0.50%	1/10W
R7307	1-219-743-11	METAL	100	5%	1/2W
R7308	1-216-809-11	METAL CHIP	100	5%	1/10W
R7309	1-216-864-11	SHORT CHIP			
R7310	1-218-710-11	METAL CHIP	5.6K	0.50%	1/10W
R7311	1-218-692-11	METAL CHIP	1K	0.50%	1/10W
R7312	1-260-133-11	CARBON	680K	5%	1/2W
R7313	1-216-818-11	METAL CHIP	560	5%	1/10W
R7314	1-218-680-11	METAL CHIP	330	0.50%	1/10W
R7315	1-218-690-11	METAL CHIP	820	0.50%	1/10W
R7316	1-218-693-11	METAL CHIP	1.1K	0.50%	1/10W
R7317	1-218-696-11	METAL CHIP	1.5K	0.50%	1/10W
R7318	1-218-704-11	METAL CHIP	3.3K	0.50%	1/10W
R7319	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R7320	1-218-749-11	METAL CHIP	240K	0.50%	1/10W
R7321	1-218-749-11	METAL CHIP	240K	0.50%	1/10W
R7322	1-215-925-11	METAL OXIDE	22K	5%	3W
R7323	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R7324	1-260-328-11	CARBON	1K	5%	1/2W
R7325	1-216-823-11	METAL CHIP	1.5K	5%	1/10W

CB UD

REF. NO.	PART NO.	DESCRIPTION	VALUES		
R7326	1-260-320-11	CARBON	220	5%	1/2W
R7328	1-249-425-11	CARBON	4.7K	5%	1/4W
R7329	1-260-087-11	CARBON	100	5%	1/2W
	SPARK GAP				
SG7301	1-519-422-11	GAP, SPARK			
SG7302	1-517-729-31	GAP, SPARK			
SG7303	1-519-421-11	GAP, DISCHARGE			

UD

The UD Board is not field repairable. If service is required, use the following part number to order a complete replacement board. Data is provided for reference only.

*	**A-1300-324-A**	**UD BOARD, COMPLETE**			
	CAPACITOR				
C7001	1-126-395-11	ELECT CHIP	22µF	20%	16V
C7002	1-162-917-11	CERAMIC CHIP	15pF	5%	50V
C7004	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C7005	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C7006	1-124-779-00	ELECT CHIP	10µF	20%	16V
C7007	1-162-917-11	CERAMIC CHIP	15pF	5%	50V
C7008	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C7010	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C7011	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C7012	1-124-779-00	ELECT CHIP	10µF	20%	16V
C7013	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C7014	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C7015	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C7016	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C7017	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C7018	1-162-923-11	CERAMIC CHIP	47pF	5%	50V
C7019	1-162-923-11	CERAMIC CHIP	47pF	5%	50V
C7020	1-162-923-11	CERAMIC CHIP	47pF	5%	50V
C7021	1-124-779-00	ELECT CHIP	10µF	20%	16V
C7022	1-115-416-11	CERAMIC CHIP	0.001µF	5%	25V
C7023	1-162-927-11	CERAMIC CHIP	100pF	5%	50V
C7024	1-124-779-00	ELECT CHIP	10µF	20%	16V
C7025	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C7026	1-124-779-00	ELECT CHIP	10µF	20%	16V
C7027	1-164-156-11	CERAMIC CHIP	0.1µF		25V

REF. NO.	PART NO.	DESCRIPTION	VALUES		
C7028	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C7029	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C7030	1-162-927-11	CERAMIC CHIP	100pF	5%	50V
C7031	1-162-927-11	CERAMIC CHIP	100pF	5%	50V
C7032	1-162-927-11	CERAMIC CHIP	100pF	5%	50V
C7033	1-124-779-00	ELECT CHIP	10µF	20%	16V
C7034	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C7035	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C7036	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C7037	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C7038	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C7039	1-126-395-11	ELECT CHIP	22µF	20%	16V
C7040	1-162-921-11	CERAMIC CHIP	33pF	5%	50V
C7041	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C7042	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C7043	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C7044	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C7045	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C7046	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C7047	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C7048	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C7049	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C7050	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C7051	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C7052	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C7053	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C7056	1-126-395-11	ELECT CHIP	22µF	20%	16V
C7057	1-162-921-11	CERAMIC CHIP	33pF	5%	50V
C7058	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C7059	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C7060	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C7061	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C7062	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C7064	1-126-395-11	ELECT CHIP	22µF	20%	16V
C7065	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C7066	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C7067	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C7068	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C7069	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C7070	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C7071	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C7078	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C7079	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C7080	1-164-156-11	CERAMIC CHIP	0.1µF		25V

	REF. NO.	PART NO.	DESCRIPTION	VALUES		
		CONNECTOR				
*	CN7001	1-816-228-21	CONNECTOR, DIV			
*	CN7002	1-564-526-11	PLUG, CONNECTOR	11P		
*	CN7004	1-564-519-11	PLUG, CONNECTOR	4P		
		DIODE				
	D7001	8-719-914-43	DIODE	DAN202K		
	D7002	8-719-069-55	DIODE	UDZSTE-175.6B		
	D7003	8-719-069-55	DIODE	UDZSTE-175.6B		
	D7004	8-719-069-55	DIODE	UDZSTE-175.6B		
	D7006	8-719-069-55	DIODE	UDZSTE-175.6B		
		FERRITE BEAD				
	FB7001	1-414-760-21	FERRITE	0µH		
	FB7002	1-414-760-21	FERRITE	0µH		
	FB7003	1-414-760-21	FERRITE	0µH		
	FB7004	1-414-760-21	FERRITE	0µH		
		FILTER				
	FL7001	1-400-087-21	FILTER, EMI REMOVAL (SMD)			
	FL7002	1-234-560-21	FILTER, LOW PASS			
	FL7003	1-234-559-21	FILTER, LOW PASS			
	FL7004	1-234-559-21	FILTER, LOW PASS			
		IC				
	IC7001	8-759-640-39	IC	BR24C02F-WE2		
	IC7002	8-749-015-18	IC	PQ07VZ012ZP		
	IC7003	8-749-015-18	IC	PQ07VZ012ZP		
	IC7004	6-702-080-01	IC	GM7030-H		
	IC7005	6-802-346-01	IC	ST72631K4M1/NNLTR		
	IC7006	8-759-641-86	IC	BR24C16F-E2		
	IC7007	6-702-170-01	IC	PACDN006S		
	IC7008	6-702-170-01	IC	PACDN006S		
	IC7009	6-702-170-01	IC	PACDN006S		
		COIL				
	L7001	1-412-058-11	INDUCTOR	10µH		
	L7002	1-412-058-11	INDUCTOR	10µH		
		RESISTOR				
	R7003	1-216-821-11	METAL CHIP	1K	5%	1/10W
	R7004	1-218-852-11	METAL CHIP	1.6K	0.50%	1/10W
	R7007	1-216-821-11	METAL CHIP	1K	5%	1/10W
	R7012	1-216-821-11	METAL CHIP	1K	5%	1/10W
	R7013	1-216-821-11	METAL CHIP	1K	5%	1/10W

REF. NO.	PART NO.	DESCRIPTION	VALUES		
R7014	1-216-821-11	METAL CHIP	1K	5%	1/10W
R7015	1-216-833-11	METAL CHIP	10K	5%	1/10W
R7016	1-216-833-11	METAL CHIP	10K	5%	1/10W
R7020	1-216-833-11	METAL CHIP	10K	5%	1/10W
R7021	1-216-833-11	METAL CHIP	10K	5%	1/10W
R7023	1-216-833-11	METAL CHIP	10K	5%	1/10W
R7024	1-216-833-11	METAL CHIP	10K	5%	1/10W
R7025	1-216-833-11	METAL CHIP	10K	5%	1/10W
R7026	1-216-833-11	METAL CHIP	10K	5%	1/10W
R7029	1-218-692-11	METAL CHIP	1K	0.50%	1/10W
R7030	1-216-864-11	SHORT CHIP			
R7032	1-218-676-11	METAL CHIP	220	0.50%	1/10W
R7034	1-218-676-11	METAL CHIP	220	0.50%	1/10W
R7036	1-218-704-11	METAL CHIP	3.3K	0.50%	1/10W
R7037	1-218-676-11	METAL CHIP	220	0.50%	1/10W
R7041	1-216-833-11	METAL CHIP	10K	5%	1/10W
R7043	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R7044	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R7045	1-216-833-11	METAL CHIP	10K	5%	1/10W
R7047	1-216-833-11	METAL CHIP	10K	5%	1/10W
R7051	1-216-864-11	SHORT CHIP			
R7053	1-216-833-11	METAL CHIP	10K	5%	1/10W
R7054	1-216-833-11	METAL CHIP	10K	5%	1/10W
R7056	1-216-833-11	METAL CHIP	10K	5%	1/10W
R7057	1-216-864-11	SHORT CHIP			
R7058	1-216-833-11	METAL CHIP	10K	5%	1/10W
R7059	1-216-864-11	SHORT CHIP			
R7060	1-216-833-11	METAL CHIP	10K	5%	1/10W
R7061	1-216-833-11	METAL CHIP	10K	5%	1/10W
R7062	1-216-864-11	SHORT CHIP			
R7065	1-216-833-11	METAL CHIP	10K	5%	1/10W
R7066	1-218-694-11	METAL CHIP	1.2K	0.50%	1/10W
R7067	1-216-833-11	METAL CHIP	10K	5%	1/10W
R7068	1-216-801-11	METAL CHIP	22	5%	1/10W
R7069	1-216-801-11	METAL CHIP	22	5%	1/10W
R7071	1-216-803-11	METAL CHIP	33	5%	1/10W
R7072	1-216-803-11	METAL CHIP	33	5%	1/10W
R7075	1-218-676-11	METAL CHIP	220	0.50%	1/10W
R7080	1-218-704-11	METAL CHIP	3.3K	0.50%	1/10W
R7087	1-218-680-11	METAL CHIP	330	0.50%	1/10W
R7096	1-216-833-11	METAL CHIP	10K	5%	1/10W
R7097	1-216-809-11	METAL CHIP	100	5%	1/10W
R7098	1-216-809-11	METAL CHIP	100	5%	1/10W

NOTE: The components identified by shading and ⚠ mark are critical for safety. Replace only with part number specified.

NOTE: Les composants identifies per un trame et une marque ⚠ sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

UD D

REF. NO.	PART NO.	DESCRIPTION	VALUES		
R7099	1-216-809-11	METAL CHIP	100	5%	1/10W
R7101	1-216-864-11	SHORT CHIP			
R7106	1-216-833-11	METAL CHIP	10K	5%	1/10W
R7108	1-216-805-11	METAL CHIP	47	5%	1/10W
R7109	1-216-805-11	METAL CHIP	47	5%	1/10W
R7111	1-216-864-11	SHORT CHIP			
R7112	1-216-864-11	SHORT CHIP			
R7113	1-216-864-11	SHORT CHIP			
R7114	1-218-700-11	METAL CHIP	2.2K	0.50%	1/10W
R7115	1-218-700-11	METAL CHIP	2.2K	0.50%	1/10W
R7116	1-218-700-11	METAL CHIP	2.2K	0.50%	1/10W
R7117	1-218-668-11	METAL CHIP	100	0.50%	1/10W
R7119	1-218-668-11	METAL CHIP	100	0.50%	1/10W
R7121	1-216-864-11	SHORT CHIP			
R7123	1-218-704-11	METAL CHIP	3.3K	0.50%	1/10W
R7124	1-218-680-11	METAL CHIP	330	0.50%	1/10W
R7125	1-218-700-11	METAL CHIP	2.2K	0.50%	1/10W
R7126	1-216-864-11	SHORT CHIP			

CRYSTAL

X7001	1-795-568-21	VIBRATOR, CRYSTAL
X7002	1-795-567-21	VIBRATOR, CRYSTAL

D

⚠*	A-1300-417-A	D BOARD, COMPLETE
	4-382-854-11	SCREW (M3X10), P, SW (+)
*	7-651-000-50	GREASE,SILICON (G-746) 200G
	7-682-952-09	SCREW +PSW 3X16

The high-voltage leads associated with the FBT on the D board are not included and must be ordered separately. Order the following leads when requesting this D board:

⚠	1-900-260-40	CONNECTOR ASSY, MV
⚠*	1-779-095-51	LEAD ASSY, HIGH-VOLTAGE

CAPACITOR

C8001	1-137-372-11	MYLAR	0.022µF	5%	50V
C8002	1-162-927-11	CERAMIC CHIP	100pF	5%	50V
C8003	1-162-927-11	CERAMIC CHIP	100pF	5%	50V
C8004	1-104-666-11	ELECT	220µF	20%	25V
C8005	1-126-942-61	ELECT	1000µF	20%	25V
C8006	1-126-942-61	ELECT	1000µF	20%	25V
C8007	1-162-927-11	CERAMIC CHIP	100pF	5%	50V
C8008	1-162-927-11	CERAMIC CHIP	100pF	5%	50V
C8009	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C8010	1-136-177-00	FILM	1µF	5%	50V
C8011	1-162-927-11	CERAMIC CHIP	100pF	5%	50V
C8012	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C8013	1-162-927-11	CERAMIC CHIP	100pF	5%	50V
C8014	1-104-665-11	ELECT	100µF	20%	25V
C8015	1-126-969-11	ELECT	220µF	20%	50V
C8016	1-104-665-11	ELECT	100µF	20%	25V
C8017	1-162-964-11	CERAMIC CHIP	0.001µF	10%	50V
C8018	1-126-964-11	ELECT	10µF	20%	50V
C8023	1-106-220-00	MYLAR	0.1µF	10%	100V
C8024	1-137-372-11	MYLAR	0.022µF	5%	50V
C8025	1-126-968-11	ELECT	100µF	20%	50V
C8026	1-126-968-11	ELECT	100µF	20%	50V
C8028	1-126-968-11	ELECT	100µF	20%	50V
C8029	1-126-968-11	ELECT	100µF	20%	50V
C8031	1-107-636-11	ELECT	10µF	20%	160V
C8032	1-126-968-11	ELECT	100µF	20%	50V
C8033	1-126-968-11	ELECT	100µF	20%	50V
C8036	1-126-968-11	ELECT	100µF	20%	50V
C8037	1-126-968-11	ELECT	100µF	20%	50V
C8040	1-115-349-51	CERAMIC	0.01µF		2KV
C8045	1-126-965-91	ELECT	22µF	20%	50V
C8046	1-126-965-91	ELECT	22µF	20%	50V
C8047	1-162-974-11	CERAMIC CHIP	0.01µF		50V
C8048	1-126-965-91	ELECT	22µF	20%	50V
C8049	1-162-974-11	CERAMIC CHIP	0.01µF		50V
C8050	1-126-965-91	ELECT	22µF	20%	50V
C8051	1-102-038-00	CERAMIC	0.001µF		500V
C8052	1-126-965-91	ELECT	22µF	20%	50V
C8053	1-162-974-11	CERAMIC CHIP	0.01µF		50V
C8054	1-162-974-11	CERAMIC CHIP	0.01µF		50V
C8055	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C8056	1-107-652-11	ELECT	10µF	20%	250V
C8057	1-126-959-11	ELECT	0.47µF	20%	50V
C8058	1-164-230-11	CERAMIC CHIP	220pF	5%	50V
C8059	1-127-715-91	CERAMIC CHIP	0.22µF	10%	16V
C8060	1-104-665-11	ELECT	100µF	20%	25V
C8061	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C8062	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V

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REF. NO.	PART NO.	DESCRIPTION	VALUES		
C8063	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C8064	1-107-636-11	ELECT	10µF	20%	160V
C8065	1-106-383-00	MYLAR	0.047µF	10%	200V
C8066	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C8067	1-104-665-11	ELECT	100µF	20%	25V
C8068	1-102-038-00	CERAMIC	0.001µF		500V
C8069	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C8070	1-126-964-11	ELECT	10µF	20%	50V
C8071	1-126-964-11	ELECT	10µF	20%	50V
C8072	1-126-964-11	ELECT	10µF	20%	50V
C8073	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C8074	1-104-665-11	ELECT	100µF	20%	25V
C8075	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C8076	1-128-551-11	ELECT	22µF	20%	63V
C8077	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C8078	1-115-416-11	CERAMIC CHIP	0.001µF	5%	25V
C8079	1-126-964-11	ELECT	10µF	20%	50V
C8080	1-126-964-11	ELECT	10µF	20%	50V
C8081	1-115-416-11	CERAMIC CHIP	0.001µF	5%	25V
C8082	1-165-176-11	CERAMIC CHIP	0.047µF	10%	16V
C8083	1-130-495-00	MYLAR	0.1µF	5%	50V
C8084	1-130-992-11	FILM	0.022µF	5%	50V
C8085	1-162-924-11	CERAMIC CHIP	56pF	5%	50V
C8086	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C8087	1-126-960-11	ELECT	1µF	20%	50V
C8088	1-126-964-11	ELECT	10µF	20%	50V
C8089	1-107-444-11	CERAMIC	100pF	5%	2KV
C8090	1-126-960-11	ELECT	1µF	20%	50V
C8091	1-104-665-11	ELECT	100µF	20%	25V
C8092	1-117-640-11	FILM	6800pF	3%	1.2KV
C8093	1-107-648-91	ELECT	100µF	20%	200V
C8094	1-126-947-11	ELECT	47µF	20%	35V
C8095	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C8096	1-136-684-51	FILM	0.0022µF	2.00%	100V
C8097	1-162-131-11	CERAMIC	220pF	10%	2KV
C8098	1-162-131-11	CERAMIC	220pF	10%	2KV
C8099	1-115-416-11	CERAMIC CHIP	0.001µF	5%	25V
C8100	1-104-665-11	ELECT	100µF	20%	25V
C8102	1-102-038-00	CERAMIC	0.001µF		500V
C8103	1-126-964-11	ELECT	10µF	20%	50V
C8104	1-162-965-11	CERAMIC CHIP	0.0015µF	10%	50V
C8105	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V

REF. NO.	PART NO.	DESCRIPTION	VALUES		
C8106	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C8107	1-136-187-11	MYLAR	0.047µF	10%	250V
C8108	1-126-964-11	ELECT	10µF	20%	50V
C8109	1-162-924-11	CERAMIC CHIP	56pF	5%	50V
C8110	1-126-960-11	ELECT	1µF	20%	50V
C8111	1-126-960-11	ELECT	1µF	20%	50V
C8112	1-164-315-11	CERAMIC CHIP	470pF	5%	50V
C8113	1-130-495-00	MYLAR	0.1µF	5%	50V
C8114	1-125-473-11	ELECT(BLOCK)	1000µF	20%	160V
C8115	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C8116	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C8117	1-102-038-00	CERAMIC	0.001µF		500V
C8118	1-136-189-00	MYLAR	0.1µF	10%	250V
C8119	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C8120	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C8121	1-115-349-51	CERAMIC	0.01µF		2KV
C8122	1-126-934-11	ELECT	220µF	20%	16V
C8123	1-107-444-11	CERAMIC	100pF	5%	2KV
C8124	1-117-642-11	FILM	8200pF	3%	1.2KV
C8125	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C8126	1-106-357-00	MYLAR	0.0039µF	99%	200V
C8127	1-126-942-61	ELECT	1000µF	20%	25V
C8129	1-137-150-11	FILM	0.01µF	5%	100V
C8131	1-128-582-11	ELECT	10µF	20%	100V
C8132	1-126-927-11	ELECT	2200µF	20%	10V
C8133	1-107-649-11	ELECT	2.2µF	20%	250V
C8135	1-117-813-11	FILM	0.75µF	5%	250V
C8136	1-130-495-00	MYLAR	0.1µF	5%	50V
C8137	1-126-927-11	ELECT	2200µF	20%	10V
C8138	1-162-964-11	CERAMIC CHIP	0.001µF	10%	50V
C8139	1-126-964-11	ELECT	10µF	20%	50V
C8142	1-117-664-11	FILM	0.27µF	5%	250V
C8143	1-126-960-11	ELECT	1µF	20%	50V
C8148	1-104-665-11	ELECT	100µF	20%	25V
C8150	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C8153	1-126-960-11	ELECT	1µF	20%	50V

CONNECTOR

*	CN8002	1-779-890-11	CONNECTOR, BOARD TO BOARD	10P
*	CN8003	1-691-135-11	PIN, CONNECTOR (PC BOARD)	4P
*	CN8004	1-779-890-11	CONNECTOR, BOARD TO BOARD	10P
*	CN8005	1-779-890-11	CONNECTOR, BOARD TO BOARD	10P
*	CN8006	1-779-890-11	CONNECTOR, BOARD TO BOARD	10P

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	REF. NO.	PART NO.	DESCRIPTION	VALUES
*	CN8007	1-564-506-11	PLUG, CONNECTOR	3P
*	CN8008	1-564-506-11	PLUG, ONNECTOR	3P
*	CN8009	1-564-506-11	PLUG, CONNECTOR	3P
*	CN8010	1-564-507-11	PLUG, CONNECTOR	4P
*	CN8011	1-564-507-11	PLUG, CONNECTOR	4P
*	CN8012	1-564-507-11	PLUG, CONNECTOR	4P
*	CN8013	1-766-177-11	PIN, CONNECTOR (PC BOARD)	9P
*	CN8015	1-506-371-00	PIN, CONNECTOR	2P
*	CN8016	1-564-507-11	PLUG, CONNECTOR	4P
*	CN8018	1-580-689-11	PIN, CONNECTOR (PC BOARD)	4P
*	CN8019	1-580-689-11	PIN, CONNECTOR (PC BOARD)	4P
*	CN8020	1-580-689-11	PIN, CONNECTOR (PC BOARD)	4P
*	CN8021	1-506-371-00	PIN, CONNECTOR	2P
*	CN8022	1-564-510-11	PLUG, CONNECTOR	7P
*	CN8023	1-564-507-11	PLUG, CONNECTOR	4P

DIODE

D8001	8-719-109-88	DIODE	RD5.6ESB1
D8002	8-719-110-53	DIODE	RD20ESB2
D8003	8-719-110-56	DIODE	RD22ESB1
D8004	8-719-908-03	DIODE	GP08D
D8005	8-719-991-33	DIODE	1SS133T-77
D8006	8-719-991-33	DIODE	1SS133T-77
D8007	8-719-991-33	DIODE	1SS133T-77
D8008	8-719-991-33	DIODE	1SS133T-77
D8009	8-719-991-33	DIODE	1SS133T-77
D8010	8-719-991-33	DIODE	1SS133T-77
D8011	8-719-991-33	DIODE	1SS133T-77
D8012	8-719-991-33	DIODE	1SS133T-77
D8013	8-719-109-85	DIODE	RD5.1ESB2
D8014	8-719-109-85	DIODE	RD5.1ESB2
D8015	8-719-991-33	DIODE	1SS133T-77
D8016	8-719-991-33	DIODE	1SS133T-77
D8019	8-719-991-33	DIODE	1SS133T-77
D8020	8-719-991-33	DIODE	1SS133T-77
D8021	8-719-061-21	DIODE	FMQ-G5FMS
D8022	8-719-991-33	DIODE	1SS133T-77
D8023	8-719-991-33	DIODE	1SS133T-77
D8024	8-719-110-39	DIODE	RD15ESB1
D8025	8-719-991-33	DIODE	1SS133T-77
D8026	8-719-109-88	DIODE	RD5.6ESB1
D8027	8-719-028-45	DIODE	D2L20U
D8028	8-719-110-39	DIODE	RD15ESB1
D8029	8-719-028-45	DIODE	D2L20U
D8030	8-719-028-45	DIODE	D2L20U
D8031	8-719-110-47	DIODE	RD18ESB
D8032	8-719-302-43	DIODE	EL1Z
D8033	8-719-028-72	DIODE	RGP02-17EL-6433
D8034	6-500-004-01	DIODE	ERD07-15L
D8035	6-500-004-01	DIODE	ERD07-15L
D8036	8-719-110-39	DIODE	RD15ESB1
D8037	8-719-028-45	DIODE	D2L20U
D8038	8-719-302-43	DIODE	EL1Z
D8039	8-719-028-72	DIODE	RGP02-17EL-6433
D8043	8-719-991-33	DIODE	1SS133T-77
D8045	8-719-908-03	DIODE	GP08D
D8046	8-719-991-33	DIODE	1SS133T-77
D8047	8-719-991-33	DIODE	1SS133T-77

FERRITE BEAD

FB8001	1-410-397-21	FERRITE	1.1µH
FB8002	1-410-397-21	FERRITE	1.1µH
FB8003	1-216-864-11	SHORT CHIP	
FB8004	1-216-864-11	SHORT CHIP	
FB8005	1-469-869-21	FERRITE	0µH
FB8006	1-469-869-21	FERRITE	0µH
FB8008	1-410-396-41	FERRITE	0.45µH
FB8009	1-410-396-41	FERRITE	0.45µH
FB8010	1-410-396-41	FERRITE	0.45µH
FB8011	1-410-396-41	FERRITE	0.45µH
FB8014	1-469-869-21	FERRITE	0µH
FB8015	1-469-869-21	FERRITE	0µH
FB8016	1-469-869-21	FERRITE	0µH
FB8017	1-469-869-21	FERRITE	0µH
FB8018	1-469-869-21	FERRITE	0µH
FB8019	1-410-397-21	FERRITE	1.1µH
FB8020	1-414-229-11	FERRITE	0µH
FB8021	1-410-397-21	FERRITE	1.1µH
FB8022	1-410-396-41	FERRITE	0.45µH
FB8023	1-410-396-41	FERRITE	0.45µH
FB8024	1-469-869-21	FERRITE	0µH

IC

IC8001	8-749-019-08	IC	STK392-560
IC8002	8-749-019-08	IC	STK392-560
IC8003	8-759-593-33	IC	LA78045
IC8004	8-759-647-17	IC	UPC2912HF
IC8005	8-759-585-82	IC	BA9759F-E2

NOTE: The components identified by shading and ⚠ mark are critical for safety. Replace only with part number specified.

NOTE: Les composants identifies per un trame et une marque ⚠ sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

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REF. NO.	PART NO.	DESCRIPTION	VALUES
IC8006	8-759-700-07	IC	NJM2903M
IC8007	8-759-700-07	IC	NJM2903M
IC8008	8-759-585-82	IC	BA9759F-E2
IC8009	8-759-803-42	IC	LA6500-FA
IC8012	8-759-701-01	IC	NJM2904M
	COIL		
L8001	1-412-533-21	INDUCTOR	47µH
L8002	1-412-533-21	INDUCTOR	47µH
L8003	1-412-525-31	INDUCTOR	10µH
L8004	1-412-533-21	INDUCTOR	47µH
L8005	1-412-533-21	INDUCTOR	47µH
L8006	1-412-525-31	INDUCTOR	10µH
L8007	1-412-533-21	INDUCTOR	47µH
L8008	1-412-533-21	INDUCTOR	47µH
L8009	1-412-525-31	INDUCTOR	10µH
L8010	1-414-187-11	INDUCTOR	47µH
L8011	1-412-525-31	INDUCTOR	10µH
L8012	1-414-187-11	INDUCTOR	47µH
L8013	1-414-856-11	INDUCTOR	10µH
L8014	1-414-189-31	INDUCTOR	100µH
L8015	1-414-189-31	INDUCTOR	100µH
L8016	1-412-537-31	INDUCTOR	100µH
L8017	1-414-856-11	INDUCTOR	10µH
L8018	1-406-667-11	INDUCTOR	220µH
L8019	1-419-352-11	COIL, HORIZONTAL LINEARITY	
L8020	1-412-525-31	INDUCTOR	10µH
L8021	1-406-659-11	INDUCTOR	10µH
L8022	1-412-552-11	INDUCTOR	2.2MH
L8023	1-414-856-11	INDUCTOR	10µH
L8024	1-414-856-11	INDUCTOR	10µH
L8025	1-414-856-11	INDUCTOR	10µH
L8026	1-414-856-11	INDUCTOR	10µH
NL8001	1-517-778-21	LAMP, NEON	
	IC LINK		
⚠ PS8001	1-533-595-31	IC LINK	3.15A 90V
⚠ PS8002	1-533-595-31	IC LINK	3.15A 90V
⚠ PS8003	1-533-595-31	IC LINK	3.15A 90V
⚠ PS8004	1-533-595-31	IC LINK	3.15A 90V
⚠ PS8005	1-533-595-31	IC LINK	3.15A 90V
⚠ PS8006	1-533-595-31	IC LINK	3.15A 90V
⚠ PS8007	1-533-595-31	IC LINK	3.15A 90V

REF. NO.	PART NO.	DESCRIPTION	VALUES
	TRANSISTOR		
Q8001	8-729-120-28	TRANSISTOR	2SC1623-L5L6
Q8002	8-729-046-80	TRANSISTOR	2SC4634LS-CB11
Q8003	8-729-026-49	TRANSISTOR	2SA1037AK-T146-R
Q8004	8-729-026-49	TRANSISTOR	2SA1037AK-T146-R
Q8005	8-729-026-49	TRANSISTOR	2SA1037AK-T146-R
Q8007	8-729-046-80	TRANSISTOR	2SC4634LS-CB11
Q8008	8-729-207-89	TRANSISTOR	2SA1358-Y
Q8009	8-729-207-82	TRANSISTOR	2SC3421-Y
Q8010	8-729-120-28	TRANSISTOR	2SC1623-L5L6
Q8011	8-729-026-49	TRANSISTOR	2SA1037AK-T146-R
Q8014	8-729-120-28	TRANSISTOR	2SC1623-L5L6
Q8015	8-729-120-28	TRANSISTOR	2SC1623-L5L6
Q8016	8-729-120-28	TRANSISTOR	2SC1623-L5L6
Q8019	8-729-026-49	TRANSISTOR	2SA1037AK-T146-R
Q8020	8-729-120-28	TRANSISTOR	2SC1623-L5L6
Q8021	8-729-120-28	TRANSISTOR	2SC1623-L5L6
Q8022	8-729-120-28	TRANSISTOR	2SC1623-L5L6
Q8023	8-729-048-47	TRANSISTOR	2SC2688(5)-LK
Q8024	8-729-056-50	TRANSISTOR	2SC5681-YB
Q8027	8-729-050-13	TRANSISTOR	2SJ585LS-CC11
Q8028	8-729-120-28	TRANSISTOR	2SC1623-L5L6
Q8029	8-729-120-28	TRANSISTOR	2SC1623-L5L6
Q8030	8-729-026-49	TRANSISTOR	2SA1037AK-T146-R
Q8031	8-729-120-28	TRANSISTOR	2SC1623-L5L6
Q8032	8-729-120-28	TRANSISTOR	2SC1623-L5L6
Q8035	8-729-050-13	TRANSISTOR	2SJ585LS-CC11
Q8036	8-729-026-49	TRANSISTOR	2SA1037AK-T146-R
Q8037	8-729-120-28	TRANSISTOR	2SC1623-L5L6
Q8038	8-729-038-10	TRANSISTOR	1MB12-140-F153A
Q8039	8-729-048-47	TRANSISTOR	2SC2688(5)-LK
Q8101	8-729-026-49	TRANSISTOR	2SA1037AK-T146-R
	RESISTOR		
R8001	1-216-825-11	METAL CHIP	2.2K 5% 1/10W
R8002	1-216-809-11	METAL CHIP	100 5% 1/10W
R8003	1-216-809-11	METAL CHIP	100 5% 1/10W
R8004	1-216-809-11	METAL CHIP	100 5% 1/10W
R8005	1-215-875-11	METAL OXIDE	10K 5% 1W
R8007	1-216-809-11	METAL CHIP	100 5% 1/10W
R8008	1-216-809-11	METAL CHIP	100 5% 1/10W
R8009	1-216-809-11	METAL CHIP	100 5% 1/10W
R8010	1-260-131-11	CARBON	470K 5% 1/2W
R8011	1-216-829-11	METAL CHIP	4.7K 5% 1/10W

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REF. NO.	PART NO.	DESCRIPTION	VALUES		
R8012	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R8013	1-218-710-11	METAL CHIP	5.6K	0.50%	1/10W
R8014	1-218-709-11	METAL CHIP	5.1K	0.50%	1/10W
R8015	1-216-837-11	METAL CHIP	22K	5%	1/10W
R8016	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R8017	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R8018	1-216-821-11	METAL CHIP	1K	5%	1/10W
R8019	1-218-712-11	METAL CHIP	6.8K	0.50%	1/10W
R8020	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R8021	1-216-833-11	METAL CHIP	10K	5%	1/10W
R8022	1-216-839-11	METAL CHIP	33K	5%	1/10W
R8023	1-216-833-11	METAL CHIP	10K	5%	1/10W
R8024	1-216-833-11	METAL CHIP	10K	5%	1/10W
R8025	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R8026	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R8029	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R8030	1-215-903-11	METAL OXIDE	68K	5%	2W
R8031	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R8032	1-216-821-11	METAL CHIP	1K	5%	1/10W
R8033	1-216-833-11	METAL CHIP	10K	5%	1/10W
R8034	1-216-833-11	METAL CHIP	10K	5%	1/10W
R8035	1-218-692-11	METAL CHIP	1K	0.50%	1/10W
R8036	1-214-800-11	METAL	2.2	1%	1/2W
R8037	1-215-903-11	METAL OXIDE	68K	5%	2W
R8038	1-216-809-11	METAL CHIP	100	5%	1/10W
R8039	1-214-800-11	METAL	2.2	1%	1/2W
R8040	1-215-913-11	METAL OXIDE	220	5%	3W
R8041	1-218-709-11	METAL CHIP	5.1K	0.50%	1/10W
R8042	1-216-826-11	METAL CHIP	2.7K	5%	1/10W
R8043	1-218-740-11	METAL CHIP	100K	0.50%	1/10W
R8044	1-218-712-11	METAL CHIP	6.8K	0.50%	1/10W
R8045	1-214-808-11	METAL	4.7	1%	1/2W
R8046	1-214-808-11	METAL	4.7	1%	1/2W
R8047	1-215-857-71	METAL OXIDE	10	5%	1W
R8048	1-414-189-31	INDUCTOR	100µH		
R8049	1-414-189-31	INDUCTOR	100µH		
R8050	1-216-833-11	METAL CHIP	10K	5%	1/10W
R8051	1-214-808-11	METAL	4.7	1%	1/2W
R8053	1-214-808-11	METAL	4.7	1%	1/2W
R8055	1-218-748-11	METAL CHIP	220K	0.50%	1/10W
R8056	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R8057	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R8058	1-216-809-11	METAL CHIP	100	5%	1/10W

REF. NO.	PART NO.	DESCRIPTION	VALUES		
R8059	1-214-808-11	METAL	4.7	1%	1/2W
R8060	1-214-808-11	METAL	4.7	1%	1/2W
R8061	1-216-392-11	METAL OXIDE	1.8	5%	3W
R8062	1-260-107-11	CARBON	4.7K	5%	1/2W
R8063	1-214-808-11	METAL	4.7	1%	1/2W
R8064	1-214-808-11	METAL	4.7	1%	1/2W
R8065	1-260-328-11	CARBON	1K	5%	1/2W
R8066	1-214-808-11	METAL	4.7	1%	1/2W
R8067	1-214-808-11	METAL	4.7	1%	1/2W
R8068	1-216-809-11	METAL CHIP	100	5%	1/10W
R8069	1-214-808-11	METAL	4.7	1%	1/2W
R8070	1-214-808-11	METAL	4.7	1%	1/2W
R8071	1-215-381-00	METAL	22	1%	1/4W
R8073	1-214-808-11	METAL	4.7	1%	1/2W
R8075	1-214-808-11	METAL	4.7	1%	1/2W
R8076	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R8077	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R8078	1-214-808-11	METAL	4.7	1%	1/2W
R8079	1-214-808-11	METAL	4.7	1%	1/2W
R8080	1-216-353-00	METAL OXIDE	2.2	5%	1W
R8081	1-214-808-11	METAL	4.7	1%	1/2W
R8082	1-214-808-11	METAL	4.7	1%	1/2W
R8083	1-216-821-11	METAL CHIP	1K	5%	1/10W
R8084	1-216-833-11	METAL CHIP	10K	5%	1/10W
R8085	1-214-808-11	METAL	4.7	1%	1/2W
R8086	1-214-808-11	METAL	4.7	1%	1/2W
R8087	1-249-385-11	CARBON	2.2	5%	1/4W
R8088	1-249-385-11	CARBON	2.2	5%	1/4W
R8089	1-214-808-11	METAL	4.7	1%	1/2W
R8090	1-214-808-11	METAL	4.7	1%	1/2W
R8091	1-214-808-11	METAL	4.7	1%	1/2W
R8092	1-214-808-11	METAL	4.7	1%	1/2W
R8093	1-214-808-11	METAL	4.7	1%	1/2W
R8094	1-214-808-11	METAL	4.7	1%	1/2W
R8095	1-216-801-11	METAL CHIP	22	5%	1/10W
R8096	1-216-801-11	METAL CHIP	22	5%	1/10W
R8097	1-214-808-11	METAL	4.7	1%	1/2W
R8098	1-214-808-11	METAL	4.7	1%	1/2W
R8099	1-218-740-11	METAL CHIP	100K	0.50%	1/10W
R8100	1-216-475-11	METAL OXIDE	120	5%	3W
R8101	1-216-475-11	METAL OXIDE	120	5%	3W
R8102	1-218-738-11	METAL CHIP	82K	0.50%	1/10W

D

REF. NO.	PART NO.	DESCRIPTION	VALUES		
R8103	1-216-816-11	METAL CHIP	390	5%	1/10W
R8104	1-216-832-11	METAL CHIP	8.2K	5%	1/10W
R8105	1-214-808-11	METAL	4.7	1%	1/2W
R8106	1-214-808-11	METAL	4.7	1%	1/2W
R8107	1-216-833-11	METAL CHIP	10K	5%	1/10W
R8108	1-216-821-11	METAL CHIP	1K	5%	1/10W
R8109	1-216-814-11	METAL CHIP	270	5%	1/10W
R8110	1-249-427-11	CARBON	6.8K	5%	1/4W
R8111	1-216-819-11	METAL CHIP	680	5%	1/10W
R8112	1-216-824-11	METAL CHIP	1.8K	5%	1/10W
R8113	1-216-475-11	METAL OXIDE	120	5%	3W
R8114	1-216-475-11	METAL OXIDE	120	5%	3W
R8115	1-216-475-11	METAL OXIDE	120	5%	3W
R8116	1-216-475-11	METAL OXIDE	120	5%	3W
R8117	1-216-833-11	METAL CHIP	10K	5%	1/10W
R8118	1-216-833-11	METAL CHIP	10K	5%	1/10W
R8119	1-216-833-11	METAL CHIP	10K	5%	1/10W
R8120	1-216-833-11	METAL CHIP	10K	5%	1/10W
R8121	1-216-809-11	METAL CHIP	100	5%	1/10W
R8123	1-216-821-11	METAL CHIP	1K	5%	1/10W
R8124	1-249-377-11	CARBON	0.47	5%	1/4W
R8125	1-216-816-11	METAL CHIP	390	5%	1/10W
R8126	1-216-823-11	METAL CHIP	1.5K	5%	1/10W
R8128	1-216-833-11	METAL CHIP	10K	5%	1/10W
R8129	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R8130	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R8131	1-216-833-11	METAL CHIP	10K	5%	1/10W
R8132	1-216-833-11	METAL CHIP	10K	5%	1/10W
R8133	1-216-486-00	METAL OXIDE	8.2K	5%	3W
R8134	1-215-873-00	METAL OXIDE	4.7K	5%	1W
R8135	1-216-486-00	METAL OXIDE	8.2K	5%	3W
R8136	1-216-833-11	METAL CHIP	10K	5%	1/10W
R8137	1-218-740-11	METAL CHIP	100K	0.50%	1/10W
R8138	1-216-833-11	METAL CHIP	10K	5%	1/10W
R8139	1-216-827-11	METAL CHIP	3.3K	5%	1/10W
R8140	1-216-833-11	METAL CHIP	10K	5%	1/10W
R8141	1-216-827-11	METAL CHIP	3.3K	5%	1/10W
R8142	1-216-833-11	METAL CHIP	10K	5%	1/10W
R8143	1-218-734-11	METAL CHIP	56K	0.50%	1/10W
R8144	1-216-809-11	METAL CHIP	100	5%	1/10W
R8145	1-218-716-11	METAL CHIP	10K	0.50%	1/10W
R8146	1-218-716-11	METAL CHIP	10K	0.50%	1/10W
R8147	1-218-710-11	METAL CHIP	5.6K	0.50%	1/10W

REF. NO.	PART NO.	DESCRIPTION	VALUES		
R8148	1-218-740-11	METAL CHIP	100K	0.50%	1/10W
R8149	1-215-905-11	METAL OXIDE	10	5%	3W
R8150	1-218-740-11	METAL CHIP	100K	0.50%	1/10W
R8151	1-218-692-11	METAL CHIP	1K	0.50%	1/10W
R8152	1-218-716-11	METAL CHIP	10K	0.50%	1/10W
R8153	1-218-692-11	METAL CHIP	1K	0.50%	1/10W
R8154	1-218-728-11	METAL CHIP	33K	0.50%	1/10W
R8155	1-215-469-00	METAL	100K	1%	1/4W
R8156	1-215-469-00	METAL	100K	1%	1/4W
R8157	1-218-738-11	METAL CHIP	82K	0.50%	1/10W
R8159	1-216-833-11	METAL CHIP	10K	5%	1/10W
R8160	1-249-393-11	CARBON	10	5%	1/4W
R8161	1-216-841-11	METAL CHIP	47K	5%	1/10W
R8163	1-216-841-11	METAL CHIP	47K	5%	1/10W
R8164	1-218-734-11	METAL CHIP	56K	0.50%	1/10W
R8165	1-249-425-11	CARBON	4.7K	5%	1/4W
R8166	1-218-716-11	METAL CHIP	10K	0.50%	1/10W
R8167	1-414-189-31	INDUCTOR	100µH		
R8168	1-216-809-11	METAL CHIP	100	5%	1/10W
R8169	1-216-841-11	METAL CHIP	47K	5%	1/10W
R8170	1-218-716-11	METAL CHIP	10K	0.50%	1/10W
R8171	1-216-809-11	METAL CHIP	100	5%	1/10W
R8172	1-249-405-11	CARBON	100	5%	1/4W
R8173	1-216-841-11	METAL CHIP	47K	5%	1/10W
R8174	1-249-425-11	CARBON	4.7K	5%	1/4W
R8176	1-218-740-11	METAL CHIP	100K	0.50%	1/10W
R8178	1-216-841-11	METAL CHIP	47K	5%	1/10W
R8179	1-414-189-31	INDUCTOR	100µH		
R8180	1-216-841-11	METAL CHIP	47K	5%	1/10W
R8181	1-216-841-11	METAL CHIP	47K	5%	1/10W
R8182	1-218-748-11	METAL CHIP	220K	0.50%	1/10W
R8183	1-218-748-11	METAL CHIP	220K	0.50%	1/10W
R8184	1-216-833-11	METAL CHIP	10K	5%	1/10W
R8187	1-216-833-11	METAL CHIP	10K	5%	1/10W
R8189	1-249-377-11	CARBON	0.47	5%	1/4W
R8190	1-215-431-00	METAL	2.7K	1%	1/4W
R8191	1-215-429-00	METAL	2.2K	1%	1/4W
R8192	1-215-449-00	METAL	15K	1%	1/4W
R8193	1-215-449-00	METAL	15K	1%	1/4W
R8194	1-215-449-00	METAL	15K	1%	1/4W
R8195	1-215-449-00	METAL	15K	1%	1/4W
R8196	1-249-425-11	CARBON	4.7K	5%	1/4W

NOTE: The components identified by shading and ⚠ mark are critical for safety. Replace only with part number specified.

A component identified by this ⋈ symbol indicates that it has been carefully factory-selected to satisfy regulations regarding X-ray radiation. Should replacement be required, replace only with the value originally used.

D B

REF. NO.	PART NO.	DESCRIPTION	VALUES		
R8197	1-216-809-11	METAL CHIP	100	5%	1/10W
R8198	1-216-833-11	METAL CHIP	10K	5%	1/10W
R8201	1-249-397-11	CARBON	22	5%	1/4W
R8202	1-260-092-11	CARBON	270	5%	1/2W
R8203	1-249-377-11	CARBON	0.47	5%	1/4W
R8205	1-249-377-11	CARBON	0.47	5%	1/4W
R8206	1-249-377-11	CARBON	0.47	5%	1/4W
R8208	1-260-288-11	CARBON	0.47	5%	1/2W
R8209	1-216-833-11	METAL CHIP	10K	5%	1/10W
R8210	1-216-809-11	METAL CHIP	100	5%	1/10W
R8211	1-215-906-11	METAL OXIDE	15	5%	3W
R8212	1-215-907-11	METAL OXIDE	22	5%	3W
R8213	1-216-821-11	METAL CHIP	1K	5%	1/10W
R8216	1-216-833-11	METAL CHIP	10K	5%	1/10W
R8217	1-216-821-11	METAL CHIP	1K	5%	1/10W
R8218	1-260-123-11	CARBON	100K	5%	1/2W
R8219	1-249-377-11	CARBON	0.47	5%	1/4W
R8220	1-216-821-11	METAL CHIP	1K	5%	1/10W
R8223	1-218-748-11	METAL CHIP	220K	0.50%	1/10W
R8224	1-260-127-11	CARBON	220K	5%	1/2W
R8225	1-260-292-11	CARBON	1	5%	1/2W
R8228	1-260-314-11	CARBON	68	5%	1/2W
R8230	1-218-751-11	METAL CHIP	300K	0.50%	1/10W
R8232	1-216-341-11	METAL OXIDE	0.22	5%	1W

TRANSFORMER

T8001	1-435-142-11	TRANSFORMER, FERRITE (DFT)	
T8002	1-437-400-11	TRANSFORMER, FERRITE (HDT)	
T8003	1-437-401-21	FERRITE TRANSFORMER (HOT)	
⚠ T8004	1-437-399-21	TRANSFORMER, FERRITE (LOT)	
⚠ T8005	1-453-285-41	FBT ASSY, NX-4006	

THERMISTOR

TH8001	1-800-193-00	THERMISTOR	

VARIABLE RESISTOR

⚠⋈ VR8001	1-225-627-91	RES, VAR, ADJ, CERMET	2K
⚠⋈ VR8002	1-225-630-91	RES, VAR, ADJ, CERMET	20K

REF. NO.	PART NO.	DESCRIPTION	VALUES		

B

The B Board is not field repairable. If service is required, use the following part number to order a complete replacement board. Data is provided for reference only.

* **A-1136-271-A B BOARD, MOUNTED**

CAPACITOR

C3001	1-128-453-21	ELECT CHIP	47µF	20%	6.3V
C3002	1-128-453-21	ELECT CHIP	47µF	20%	6.3V
C3003	1-128-453-21	ELECT CHIP	47µF	20%	6.3V
C3035	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C3044	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3089	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C3090	1-126-204-11	ELECT CHIP	47µF	20%	16V
C3096	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C3101	1-162-925-11	CERAMIC CHIP	68pF	5%	50V
C3102	1-162-925-11	CERAMIC CHIP	68pF	5%	50V
C3301	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3302	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3303	1-126-206-11	ELECT CHIP	100µF	20%	6.3V
C3304	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3305	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3306	1-126-204-11	ELECT CHIP	47µF	20%	16V
C3307	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3308	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3309	1-126-206-11	ELECT CHIP	100µF	20%	6.3V
C3310	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3311	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3312	1-126-206-11	ELECT CHIP	100µF	20%	6.3V
C3313	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3314	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3315	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3316	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3317	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3318	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3319	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3320	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3321	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3322	1-126-204-11	ELECT CHIP	47µF	20%	16V
C3323	1-124-779-00	ELECT CHIP	10µF	20%	16V
C3324	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3325	1-164-156-11	CERAMIC CHIP	0.1µF		25V

B

REF. NO.	PART NO.	DESCRIPTION	VALUES		
C3326	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3327	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3328	1-124-779-00	ELECT CHIP	10µF	20%	16V
C3329	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C3331	1-126-204-11	ELECT CHIP	47µF	20%	16V
C3332	1-124-779-00	ELECT CHIP	10µF	20%	16V
C3333	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3334	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C3335	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3336	1-124-779-00	ELECT CHIP	10µF	20%	16V
C3337	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C3338	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3339	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3340	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3341	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3343	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3344	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3345	1-126-204-11	ELECT CHIP	47µF	20%	16V
C3346	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3347	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3348	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3349	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3350	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3351	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3352	1-124-779-00	ELECT CHIP	10µF	20%	16V
C3353	1-126-204-11	ELECT CHIP	47µF	20%	16V
C3354	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3355	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3356	1-126-204-11	ELECT CHIP	47µF	20%	16V
C3357	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3358	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3359	1-126-204-11	ELECT CHIP	47µF	20%	16V
C3360	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3361	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C3362	1-127-760-11	CERAMIC CHIP	4.7µF	10%	6.3V
C3363	1-126-204-11	ELECT CHIP	47µF	20%	16V
C3364	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3365	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3366	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3367	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3368	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3369	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3370	1-164-156-11	CERAMIC CHIP	0.1µF		25V

REF. NO.	PART NO.	DESCRIPTION	VALUES		
C3371	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3372	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3373	1-162-915-11	CERAMIC CHIP	10pF	0.50pF	50V
C3374	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3375	1-127-760-11	CERAMIC CHIP	4.7µF	10%	6.3V
C3376	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3377	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C3378	1-126-204-11	ELECT CHIP	47µF	20%	16V
C3379	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3401	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3402	1-124-779-00	ELECT CHIP	10µF	20%	16V
C3403	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3404	1-126-206-11	ELECT CHIP	100µF	20%	6.3V
C3405	1-126-206-11	ELECT CHIP	100µF	20%	6.3V
C3406	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C3407	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C3408	1-126-206-11	ELECT CHIP	100µF	20%	6.3V
C3409	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3410	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3411	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3412	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3413	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3414	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3415	1-124-779-00	ELECT CHIP	10µF	20%	16V
C3416	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3417	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3418	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C3419	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3420	1-124-779-00	ELECT CHIP	10µF	20%	16V
C3421	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3422	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3423	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C3424	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3425	1-125-891-11	CERAMIC CHIP	0.47µF	10%	10V
C3426	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3428	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C3429	1-124-779-00	ELECT CHIP	10µF	20%	16V
C3430	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3431	1-126-204-11	ELECT CHIP	47µF	20%	16V
C3432	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3433	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C3434	1-126-204-11	ELECT CHIP	47µF	20%	16V

B

REF. NO.	PART NO.	DESCRIPTION	VALUES		
C3435	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3436	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C3437	1-126-204-11	ELECT CHIP	47µF	20%	16V
C3438	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3439	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3440	1-162-916-11	CERAMIC CHIP	12pF	5%	50V
C3441	1-162-916-11	CERAMIC CHIP	12pF	5%	50V
C3442	1-124-779-00	ELECT CHIP	10µF	20%	16V
C3443	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C3444	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3445	1-126-204-11	ELECT CHIP	47µF	20%	16V
C3446	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C3447	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3448	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C3449	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3450	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3451	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3452	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3453	1-124-779-00	ELECT CHIP	10µF	20%	16V
C3454	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3455	1-124-779-00	ELECT CHIP	10µF	20%	16V
C3456	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3457	1-124-779-00	ELECT CHIP	10µF	20%	16V
C3458	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3460	1-162-923-11	CERAMIC CHIP	47pF	5%	50V
C3462	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3463	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3464	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3465	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3466	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3467	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3468	1-126-206-11	ELECT CHIP	100µF	20%	6.3V
C3469	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3470	1-126-206-11	ELECT CHIP	100µF	20%	6.3V
C3473	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3474	1-124-779-00	ELECT CHIP	10µF	20%	16V
C3475	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3476	1-124-779-00	ELECT CHIP	10µF	20%	16V
C3477	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3478	1-126-204-11	ELECT CHIP	47µF	20%	16V
C3479	1-124-779-00	ELECT CHIP	10µF	20%	16V
C3480	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3481	1-117-681-11	ELECT CHIP	100µF	20%	16V
C3482	1-117-681-11	ELECT CHIP	100µF	20%	16V
C3483	1-117-681-11	ELECT CHIP	100µF	20%	16V
C3484	1-125-837-91	CERAMIC CHIP	1µF	10%	6.3V
C3485	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3486	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3487	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3488	1-124-779-00	ELECT CHIP	10µF	20%	16V
C3489	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3490	1-124-779-00	ELECT CHIP	10µF	20%	16V
C3491	1-126-204-11	ELECT CHIP	47µF	20%	16V
C3492	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3493	1-126-204-11	ELECT CHIP	47µF	20%	16V
C3494	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3495	1-124-779-00	ELECT CHIP	10µF	20%	16V
C3496	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3499	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V

CONNECTOR

*	CN3203	1-793-923-11	CONNECTOR, DIN (PLUG)		64P

DIODE

D3089	8-719-062-51	DIODE	1PS226-115
D3090	8-719-062-51	DIODE	1PS226-115
D3099	8-719-988-61	DIODE	1SS355TE-17
D3301	8-719-083-58	DIODE	UDZSTE-173.9B
D3302	8-719-069-60	DIODE	UDZSTE-179.1B
D3401	8-719-914-43	DIODE	DAN202K
D3402	8-719-914-44	DIODE	DAP202K
D3403	8-719-978-33	DIODE	DTZ-TT11-6.8B

FERRITE BEAD

FB3302	1-500-451-11	FERRITE	0µH
FB3303	1-469-110-21	FERRITE	0µH
FB3401	1-414-235-22	FERRITE	0µH
FB3402	1-414-235-22	FERRITE	0µH

FILTER

FL3003	1-781-924-21	FILTER, LOW PASS (SMD)
FL3301	1-234-558-21	FILTER, LOW PASS
FL3302	1-234-557-21	FILTER, LOW PASS
FL3303	1-234-557-21	FILTER, LOW PASS
FL3401	1-781-923-21	FILTER, LOW PASS (SMD)

B

REF. NO.	PART NO.	DESCRIPTION	VALUES
	IC		
IC3089	6-700-149-01	IC	M24C04-MN6T(A)
IC3090	8-759-832-08	IC	MB94918RpF-G-134-BND
IC3091	8-759-349-11	IC	PST9145NL
IC3301	8-759-663-74	IC	HY57V161610DTC-7TR
IC3302	8-759-832-05	IC	BA18BC0FP-E2
IC3303	8-752-409-78	IC	CXD2095AQ
IC3304	8-759-447-90	IC	TLC5733AIPM
IC3305	8-759-669-75	IC	TLC2932IPWR
IC3306	8-759-669-78	IC	TLC2933IPWR-12
IC3401	6-700-394-01	IC	BA25BC0FP-E2
IC3402	6-703-430-01	IC	MT48LC2M32B2TG-6-Y94W
IC3403	8-759-460-29	IC	PST9120NL
IC3404	8-759-669-75	IC	TLC2932IPWR
IC3405	8-759-485-79	IC	TC7SET08FU(TE85L)
IC3406	8-759-485-79	IC	TC7SET08FU(TE85L)
IC3407	8-759-485-79	IC	TC7SET08FU(TE85L)
IC3408	8-759-672-57	IC	CXD9509AQ
IC3409	8-759-833-72	IC	NJM2870F25-TE2
IC3410	8-752-367-59	IC	CXD2309Q
IC3411	8-759-082-57	IC	TC7W04FU
IC3412	8-759-082-58	IC	TC7W08FU
IC3413	8-759-595-97	IC	SN74LV4053ANSR
IC3414	8-759-548-56	IC	M52055FP
	COIL		
L3001	1-216-295-91	SHORT CHIP	
L3089	1-414-233-22	FERRITE	0µH
L3102	1-412-946-11	INDUCTOR	3.9µH
L3301	1-412-058-11	INDUCTOR	10µH
L3302	1-469-555-21	INDUCTOR	10µH
L3303	1-412-052-21	INDUCTOR	1µH
L3304	1-469-555-21	INDUCTOR	10µH
L3305	1-469-555-21	INDUCTOR	10µH
L3306	1-469-561-21	INDUCTOR	100µH
L3307	1-469-555-21	INDUCTOR	10µH
L3308	1-469-561-21	INDUCTOR	100µH
L3309	1-469-561-21	INDUCTOR	100µH
L3310	1-469-561-21	INDUCTOR	100µH
L3311	1-469-561-21	INDUCTOR	100µH
L3312	1-469-555-21	INDUCTOR	10µH
L3401	1-412-058-11	INDUCTOR	10µH
L3402	1-412-052-21	INDUCTOR	1µH
L3403	1-469-561-21	INDUCTOR	100µH
L3404	1-469-561-21	INDUCTOR	100µH
L3405	1-469-555-21	INDUCTOR	10µH
L3406	1-469-555-21	INDUCTOR	10µH
L3407	1-469-555-21	INDUCTOR	10µH
L3408	1-469-555-21	INDUCTOR	10µH
L3409	1-469-555-21	INDUCTOR	10µH
L3410	1-412-058-11	INDUCTOR	10µH
L3411	1-412-058-11	INDUCTOR	10µH
L3412	1-469-555-21	INDUCTOR	10µH
L3413	1-469-555-21	INDUCTOR	10µH
L3414	1-469-555-21	INDUCTOR	10µH
L3416	1-469-555-21	INDUCTOR	10µH
	TRANSISTOR		
Q3005	8-729-120-28	TRANSISTOR	2SC1623-L5L6
Q3006	8-729-120-28	TRANSISTOR	2SC1623-L5L6
Q3007	8-729-120-28	TRANSISTOR	2SC1623-L5L6
Q3089	8-729-026-49	TRANSISTOR	2SA1037AK-T146-R
Q3090	8-729-026-49	TRANSISTOR	2SA1037AK-T146-R
Q3091	1-801-806-11	TRANSISTOR	DTC144EKA
Q3301	8-729-120-28	TRANSISTOR	2SC1623-L5L6
Q3302	8-729-120-28	TRANSISTOR	2SC1623-L5L6
Q3303	8-729-120-28	TRANSISTOR	2SC1623-L5L6
Q3304	8-729-120-28	TRANSISTOR	2SC1623-L5L6
Q3305	8-729-026-49	TRANSISTOR	2SA1037AK-T146-R
Q3306	8-729-026-49	TRANSISTOR	2SA1037AK-T146-R
Q3307	8-729-120-28	TRANSISTOR	2SC1623-L5L6
Q3308	8-729-026-49	TRANSISTOR	2SA1037AK-T146-R
Q3309	8-729-120-28	TRANSISTOR	2SC1623-L5L6
Q3310	8-729-026-49	TRANSISTOR	2SA1037AK-T146-R
Q3311	8-729-120-28	TRANSISTOR	2SC1623-L5L6
Q3401	8-729-120-28	TRANSISTOR	2SC1623-L5L6
Q3402	8-729-028-28	TRANSISTOR	2SK2036(TE85L)
Q3403	8-729-120-28	TRANSISTOR	2SC1623-L5L6
Q3404	8-729-028-28	TRANSISTOR	2SK2036(TE85L)
Q3405	8-729-026-49	TRANSISTOR	2SA1037AK-T146-R
Q3406	8-729-026-49	TRANSISTOR	2SA1037AK-T146-R
Q3407	8-729-120-28	TRANSISTOR	2SC1623-L5L6
Q3408	8-729-026-49	TRANSISTOR	2SA1037AK-T146-R
Q3409	8-729-120-28	TRANSISTOR	2SC1623-L5L6
Q3410	8-729-026-49	TRANSISTOR	2SA1037AK-T146-R
Q3411	8-729-026-49	TRANSISTOR	2SA1037AK-T146-R
Q3412	8-729-026-49	TRANSISTOR	2SA1037AK-T146-R
Q3413	8-729-026-49	TRANSISTOR	2SA1037AK-T146-R

B

REF. NO.	PART NO.	DESCRIPTION	VALUES		
Q3414	8-729-026-49	TRANSISTOR	2SA1037AK-T146-R		
Q3415	8-729-026-49	TRANSISTOR	2SA1037AK-T146-R		
	RESISTOR				
R3001	1-216-833-11	METAL CHIP	10K	5%	1/10W
R3002	1-216-864-11	SHORT CHIP			
R3021	1-216-809-11	METAL CHIP	100	5%	1/10W
R3022	1-216-809-11	METAL CHIP	100	5%	1/10W
R3023	1-216-833-11	METAL CHIP	10K	5%	1/10W
R3035	1-216-809-11	METAL CHIP	100	5%	1/10W
R3036	1-216-809-11	METAL CHIP	100	5%	1/10W
R3037	1-216-809-11	METAL CHIP	100	5%	1/10W
R3038	1-218-686-11	METAL CHIP	560	0.50%	1/10W
R3039	1-218-686-11	METAL CHIP	560	0.50%	1/10W
R3040	1-218-686-11	METAL CHIP	560	0.50%	1/10W
R3050	1-216-809-11	METAL CHIP	100	5%	1/10W
R3079	1-216-821-11	METAL CHIP	1K	5%	1/10W
R3089	1-216-864-11	SHORT CHIP			
R3091	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R3092	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R3095	1-216-845-11	METAL CHIP	100K	5%	1/10W
R3096	1-216-817-11	METAL CHIP	470	5%	1/10W
R3097	1-216-845-11	METAL CHIP	100K	5%	1/10W
R3098	1-216-805-11	METAL CHIP	47	5%	1/10W
R3099	1-216-805-11	METAL CHIP	47	5%	1/10W
R3100	1-216-809-11	METAL CHIP	100	5%	1/10W
R3101	1-216-809-11	METAL CHIP	100	5%	1/10W
R3102	1-216-809-11	METAL CHIP	100	5%	1/10W
R3103	1-216-822-11	METAL CHIP	1.2K	5%	1/10W
R3104	1-216-809-11	METAL CHIP	100	5%	1/10W
R3105	1-216-809-11	METAL CHIP	100	5%	1/10W
R3106	1-216-818-11	METAL CHIP	560	5%	1/10W
R3107	1-216-864-11	SHORT CHIP			
R3108	1-216-817-11	METAL CHIP	470	5%	1/10W
R3109	1-216-823-11	METAL CHIP	1.5K	5%	1/10W
R3110	1-216-809-11	METAL CHIP	100	5%	1/10W
R3111	1-216-809-11	METAL CHIP	100	5%	1/10W
R3301	1-216-809-11	METAL CHIP	100	5%	1/10W
R3302	1-216-817-11	METAL CHIP	470	5%	1/10W
R3303	1-218-710-11	METAL CHIP	5.6K	0.50%	1/10W
R3304	1-216-809-11	METAL CHIP	100	5%	1/10W
R3305	1-216-809-11	METAL CHIP	100	5%	1/10W
R3306	1-216-809-11	METAL CHIP	100	5%	1/10W
R3307	1-216-864-11	SHORT CHIP			
R3308	1-216-864-11	SHORT CHIP			
R3309	1-218-662-11	METAL CHIP	56	0.50%	1/10W
R3310	1-218-662-11	METAL CHIP	56	0.50%	1/10W
R3311	1-218-662-11	METAL CHIP	56	0.50%	1/10W
R3312	1-218-662-11	METAL CHIP	56	0.50%	1/10W
R3313	1-216-835-11	METAL CHIP	15K	5%	1/10W
R3314	1-218-665-11	METAL CHIP	75	0.50%	1/10W
R3315	1-216-835-11	METAL CHIP	15K	5%	1/10W
R3316	1-218-664-11	METAL CHIP	68	0.50%	1/10W
R3317	1-218-664-11	METAL CHIP	68	0.50%	1/10W
R3318	1-218-665-11	METAL CHIP	75	0.50%	1/10W
R3319	1-218-662-11	METAL CHIP	56	0.50%	1/10W
R3320	1-218-662-11	METAL CHIP	56	0.50%	1/10W
R3321	1-218-662-11	METAL CHIP	56	0.50%	1/10W
R3322	1-218-662-11	METAL CHIP	56	0.50%	1/10W
R3323	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R3324	1-216-827-11	METAL CHIP	3.3K	5%	1/10W
R3325	1-216-827-11	METAL CHIP	3.3K	5%	1/10W
R3326	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R3327	1-216-835-11	METAL CHIP	15K	5%	1/10W
R3328	1-216-864-11	SHORT CHIP			
R3329	1-216-815-11	METAL CHIP	330	5%	1/10W
R3330	1-216-815-11	METAL CHIP	330	5%	1/10W
R3331	1-216-841-11	METAL CHIP	47K	5%	1/10W
R3332	1-218-709-11	METAL CHIP	5.1K	0.50%	1/10W
R3333	1-216-864-11	SHORT CHIP			
R3334	1-216-809-11	METAL CHIP	100	5%	1/10W
R3335	1-216-833-11	METAL CHIP	10K	5%	1/10W
R3337	1-216-820-11	METAL CHIP	820	5%	1/10W
R3338	1-216-821-11	METAL CHIP	1K	5%	1/10W
R3339	1-216-855-11	METAL CHIP	680K	5%	1/10W
R3340	1-216-855-11	METAL CHIP	680K	5%	1/10W
R3341	1-216-813-11	METAL CHIP	220	5%	1/10W
R3342	1-218-705-11	METAL CHIP	3.6K	0.50%	1/10W
R3343	1-216-809-11	METAL CHIP	100	5%	1/10W
R3344	1-216-853-11	METAL CHIP	470K	5%	1/10W
R3345	1-218-704-11	METAL CHIP	3.3K	0.50%	1/10W
R3346	1-216-809-11	METAL CHIP	100	5%	1/10W
R3347	1-216-815-11	METAL CHIP	330	5%	1/10W
R3348	1-216-864-11	SHORT CHIP			
R3349	1-218-687-11	METAL CHIP	620	0.50%	1/10W
R3350	1-216-814-11	METAL CHIP	270	5%	1/10W
R3351	1-216-825-11	METAL CHIP	2.2K	5%	1/10W

B

REF. NO.	PART NO.	DESCRIPTION	VALUES		
R3352	1-216-853-11	METAL CHIP	470K	5%	1/10W
R3353	1-216-837-11	METAL CHIP	22K	5%	1/10W
R3354	1-216-813-11	METAL CHIP	220	5%	1/10W
R3355	1-216-821-11	METAL CHIP	1K	5%	1/10W
R3356	1-216-819-11	METAL CHIP	680	5%	1/10W
R3357	1-218-676-11	METAL CHIP	220	0.50%	1/10W
R3358	1-218-676-11	METAL CHIP	220	0.50%	1/10W
R3359	1-218-676-11	METAL CHIP	220	0.50%	1/10W
R3360	1-216-827-11	METAL CHIP	3.3K	5%	1/10W
R3361	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R3364	1-216-864-11	SHORT CHIP			
R3365	1-216-827-11	METAL CHIP	3.3K	5%	1/10W
R3366	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R3367	1-216-803-11	METAL CHIP	33	5%	1/10W
R3369	1-216-864-11	SHORT CHIP			
R3371	1-218-686-11	METAL CHIP	560	0.50%	1/10W
R3372	1-216-817-11	METAL CHIP	470	5%	1/10W
R3373	1-216-817-11	METAL CHIP	470	5%	1/10W
R3374	1-216-809-11	METAL CHIP	100	5%	1/10W
R3375	1-218-686-11	METAL CHIP	560	0.50%	1/10W
R3376	1-218-710-11	METAL CHIP	5.6K	0.50%	1/10W
R3377	1-216-817-11	METAL CHIP	470	5%	1/10W
R3378	1-216-817-11	METAL CHIP	470	5%	1/10W
R3379	1-216-809-11	METAL CHIP	100	5%	1/10W
R3380	1-218-686-11	METAL CHIP	560	0.50%	1/10W
R3381	1-218-710-11	METAL CHIP	5.6K	0.50%	1/10W
R3382	1-216-864-11	SHORT CHIP			
R3383	1-216-817-11	METAL CHIP	470	5%	1/10W
R3384	1-216-809-11	METAL CHIP	100	5%	1/10W
R3410	1-216-833-11	METAL CHIP	10K	5%	1/10W
R3421	1-216-864-11	SHORT CHIP			
R3422	1-216-864-11	SHORT CHIP			
R3423	1-216-813-11	METAL CHIP	220	5%	1/10W
R3428	1-216-803-11	METAL CHIP	33	5%	1/10W
R3429	1-216-823-11	METAL CHIP	1.5K	5%	1/10W
R3432	1-216-815-11	METAL CHIP	330	5%	1/10W
R3434	1-216-809-11	METAL CHIP	100	5%	1/10W
R3445	1-216-864-11	SHORT CHIP			
R3446	1-216-821-11	METAL CHIP	1K	5%	1/10W
R3447	1-216-819-11	METAL CHIP	680	5%	1/10W
R3448	1-216-855-11	METAL CHIP	680K	5%	1/10W
R3452	1-216-864-11	SHORT CHIP			
R3454	1-216-825-11	METAL CHIP	2.2K	5%	1/10W

REF. NO.	PART NO.	DESCRIPTION	VALUES		
R3460	1-216-833-11	METAL CHIP	10K	5%	1/10W
R3461	1-216-833-11	METAL CHIP	10K	5%	1/10W
R3464	1-216-821-11	METAL CHIP	1K	5%	1/10W
R3465	1-216-821-11	METAL CHIP	1K	5%	1/10W
R3467	1-216-821-11	METAL CHIP	1K	5%	1/10W
R3470	1-216-809-11	METAL CHIP	100	5%	1/10W
R3471	1-216-821-11	METAL CHIP	1K	5%	1/10W
R3472	1-216-801-11	METAL CHIP	22	5%	1/10W
R3475	1-216-809-11	METAL CHIP	100	5%	1/10W
R3476	1-216-821-11	METAL CHIP	1K	5%	1/10W
R3477	1-218-701-11	METAL CHIP	2.4K	0.50%	1/10W
R3478	1-216-821-11	METAL CHIP	1K	5%	1/10W
R3483	1-218-701-11	METAL CHIP	2.4K	0.50%	1/10W
R3484	1-216-821-11	METAL CHIP	1K	5%	1/10W
R3485	1-216-821-11	METAL CHIP	1K	5%	1/10W
R3486	1-216-801-11	METAL CHIP	22	5%	1/10W
R3489	1-216-864-11	SHORT CHIP			
R3490	1-216-864-11	SHORT CHIP			
R3491	1-216-821-11	METAL CHIP	1K	5%	1/10W
R3492	1-216-821-11	METAL CHIP	1K	5%	1/10W
R3493	1-218-701-11	METAL CHIP	2.4K	0.50%	1/10W
R3495	1-216-821-11	METAL CHIP	1K	5%	1/10W
R3496	1-216-801-11	METAL CHIP	22	5%	1/10W
R3497	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R3498	1-216-818-11	METAL CHIP	560	5%	1/10W
R3499	1-216-821-11	METAL CHIP	1K	5%	1/10W
R3501	1-216-821-11	METAL CHIP	1K	5%	1/10W
R3502	1-216-821-11	METAL CHIP	1K	5%	1/10W
R3503	1-216-821-11	METAL CHIP	1K	5%	1/10W
R3504	1-216-821-11	METAL CHIP	1K	5%	1/10W
R3505	1-216-821-11	METAL CHIP	1K	5%	1/10W
R3506	1-216-821-11	METAL CHIP	1K	5%	1/10W
R3507	1-216-821-11	METAL CHIP	1K	5%	1/10W
R3508	1-216-821-11	METAL CHIP	1K	5%	1/10W
R3509	1-216-821-11	METAL CHIP	1K	5%	1/10W
R3510	1-216-821-11	METAL CHIP	1K	5%	1/10W
R3511	1-216-821-11	METAL CHIP	1K	5%	1/10W
R3512	1-216-821-11	METAL CHIP	1K	5%	1/10W
R3800	1-216-864-11	SHORT CHIP			
R3802	1-218-678-11	METAL CHIP	270	0.50%	1/10W
R3803	1-218-678-11	METAL CHIP	270	0.50%	1/10W
R3804	1-218-678-11	METAL CHIP	270	0.50%	1/10W
R3805	1-218-678-11	METAL CHIP	270	0.50%	1/10W
R3806	1-218-662-11	METAL CHIP	56	0.50%	1/10W

B

REF. NO.	PART NO.	DESCRIPTION	VALUES		
R3807	1-218-670-11	METAL CHIP	120	0.50%	1/10W
R3808	1-218-670-11	METAL CHIP	120	0.50%	1/10W
R3809	1-218-670-11	METAL CHIP	120	0.50%	1/10W
R3810	1-218-670-11	METAL CHIP	120	0.50%	1/10W
R3811	1-216-809-11	METAL CHIP	100	5%	1/10W
R3812	1-216-809-11	METAL CHIP	100	5%	1/10W
R3813	1-216-809-11	METAL CHIP	100	5%	1/10W
R3814	1-218-644-11	METAL CHIP	10	0.50%	1/10W
R3815	1-218-648-11	METAL CHIP	15	0.50%	1/10W
R3816	1-218-652-11	METAL CHIP	22	0.50%	1/10W
R3817	1-218-652-11	METAL CHIP	22	0.50%	1/10W
R3820	1-218-684-11	METAL CHIP	470	0.50%	1/10W
R3821	1-218-684-11	METAL CHIP	470	0.50%	1/10W
R3822	1-218-684-11	METAL CHIP	470	0.50%	1/10W
R3823	1-216-826-11	METAL CHIP	2.7K	5%	1/10W
R3824	1-216-826-11	METAL CHIP	2.7K	5%	1/10W
R3825	1-216-826-11	METAL CHIP	2.7K	5%	1/10W
R3826	1-216-809-11	METAL CHIP	100	5%	1/10W
R3828	1-218-684-11	METAL CHIP	470	0.50%	1/10W
R3829	1-218-684-11	METAL CHIP	470	0.50%	1/10W
R3830	1-218-684-11	METAL CHIP	470	0.50%	1/10W
R3831	1-216-864-11	SHORT CHIP			
R3832	1-216-864-11	SHORT CHIP			
R3833	1-216-864-11	SHORT CHIP			
R3834	1-218-678-11	METAL CHIP	270	0.50%	1/10W
R3835	1-218-678-11	METAL CHIP	270	0.50%	1/10W
R3836	1-218-678-11	METAL CHIP	270	0.50%	1/10W
R3837	1-218-678-11	METAL CHIP	270	0.50%	1/10W
R3838	1-218-678-11	METAL CHIP	270	0.50%	1/10W
R3839	1-218-670-11	METAL CHIP	120	0.50%	1/10W
R3840	1-216-803-11	METAL CHIP	33	5%	1/10W
R3841	1-218-670-11	METAL CHIP	120	0.50%	1/10W
R3842	1-218-689-11	METAL CHIP	750	0.50%	1/10W
R3846	1-216-801-11	METAL CHIP	22	5%	1/10W
R3847	1-216-801-11	METAL CHIP	22	5%	1/10W
R3848	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R3849	1-218-675-11	METAL CHIP	200	0.50%	1/10W
R3850	1-218-675-11	METAL CHIP	200	0.50%	1/10W
R3851	1-216-809-11	METAL CHIP	100	5%	1/10W
R3852	1-218-675-11	METAL CHIP	200	0.50%	1/10W
R3854	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R3857	1-216-809-11	METAL CHIP	100	5%	1/10W
R3858	1-218-704-11	METAL CHIP	3.3K	0.50%	1/10W

REF. NO.	PART NO.	DESCRIPTION	VALUES		
R3862	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R3863	1-218-700-11	METAL CHIP	2.2K	0.50%	1/10W
R3864	1-216-827-11	METAL CHIP	3.3K	5%	1/10W
R3865	1-216-809-11	METAL CHIP	100	5%	1/10W
R3866	1-414-234-22	FERRITE	0µH		
R3867	1-414-234-22	FERRITE	0µH		
R3868	1-414-234-22	FERRITE	0µH		
R3869	1-218-719-11	METAL CHIP	13K	0.50%	1/10W
R3870	1-218-719-11	METAL CHIP	13K	0.50%	1/10W
R3871	1-218-719-11	METAL CHIP	13K	0.50%	1/10W
R3881	1-216-807-11	METAL CHIP	68	5%	1/10W
R3882	1-216-807-11	METAL CHIP	68	5%	1/10W
R3883	1-216-807-11	METAL CHIP	68	5%	1/10W
R3915	1-218-644-11	METAL CHIP	10	0.50%	1/10W
R3916	1-218-644-11	METAL CHIP	10	0.50%	1/10W
R3917	1-218-644-11	METAL CHIP	10	0.50%	1/10W
R3923	1-412-363-21	FERRITE	0µH		
R3933	1-216-864-11	SHORT CHIP			
R3937	1-216-809-11	METAL CHIP	100	5%	1/10W
R3953	1-216-821-11	METAL CHIP	1K	5%	1/10W
R3954	1-216-821-11	METAL CHIP	1K	5%	1/10W
R3955	1-216-821-11	METAL CHIP	1K	5%	1/10W
R3956	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R3957	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R3958	1-216-825-11	METAL CHIP	2.2K	5%	1/10W

RESISTOR BRIDGE

RB3304	1-234-525-21	RES, CHIP NETWORK	56
RB3305	1-234-525-21	RES, CHIP NETWORK	56
RB3306	1-234-525-21	RES, CHIP NETWORK	56
RB3307	1-234-525-21	RES, CHIP NETWORK	56
RB3401	1-234-524-21	RES, CHIP NETWORK	33
RB3402	1-234-524-21	RES, CHIP NETWORK	33
RB3403	1-234-524-21	RES, CHIP NETWORK	33
RB3404	1-234-524-21	RES, CHIP NETWORK	33
RB3405	1-234-524-21	RES, CHIP NETWORK	33
RB3406	1-234-524-21	RES, CHIP NETWORK	33
RB3407	1-239-409-11	NETWORK RESISTOR(CHIP)	47
RB3408	1-239-409-11	NETWORK RESISTOR(CHIP)	47
RB3409	1-239-409-11	NETWORK RESISTOR(CHIP)	47
RB3410	1-239-409-11	NETWORK RESISTOR(CHIP)	47
RB3411	1-239-409-11	NETWORK RESISTOR(CHIP)	47

B AD

REF. NO.	PART NO.	DESCRIPTION	VALUES
RB3412	1-239-409-11	NETWORK RESISTOR(CHIP)	47
RB3421	1-239-409-11	NETWORK RESISTOR(CHIP)	47
RB3422	1-239-409-11	NETWORK RESISTOR(CHIP)	47
RB3423	1-239-409-11	NETWORK RESISTOR(CHIP)	47
RB3424	1-239-409-11	NETWORK RESISTOR(CHIP)	47
RB3425	1-239-409-11	NETWORK RESISTOR(CHIP)	47
RB3426	1-239-409-11	NETWORK RESISTOR(CHIP)	47
RB3427	1-239-409-11	NETWORK RESISTOR(CHIP)	47
RB3428	1-239-409-11	NETWORK RESISTOR(CHIP)	47
	CRYSTAL		
X3089	1-781-945-21	VIBRATOR, CERAMIC	
X3401	1-781-887-21	VIBRATOR, CRYSTAL	
X3402	1-781-579-21	OSCILLATOR, CRYSTAL	

AD

The AD Board is not field repairable. If service is required, use the following part number to order a complete replacement board. Data is provided for reference only.

*	**A-1299-523-A**	**AD BOARD, MOUNTED**	
	CAPACITOR		
C1601	1-126-933-11	ELECT	100µF 20% 16V
C1604	1-164-156-11	CERAMIC CHIP	0.1µF 25V
C1605	1-164-156-11	CERAMIC CHIP	0.1µF 25V
C1606	1-164-156-11	CERAMIC CHIP	0.1µF 25V
C1607	1-126-933-11	ELECT	100µF 20% 16V
C1608	1-164-156-11	CERAMIC CHIP	0.1µF 25V
C1609	1-162-966-11	CERAMIC CHIP	0.0022µF 10% 50V
C1610	1-162-962-11	CERAMIC CHIP	470pF 10% 50V
C1611	1-164-156-11	CERAMIC CHIP	0.1µF 25V
C1612	1-164-156-11	CERAMIC CHIP	0.1µF 25V
C1613	1-164-156-11	CERAMIC CHIP	0.1µF 25V
C1614	1-164-156-11	CERAMIC CHIP	0.1µF 25V
C1615	1-164-156-11	CERAMIC CHIP	0.1µF 25V
C1616	1-164-156-11	CERAMIC CHIP	0.1µF 25V
C1617	1-164-156-11	CERAMIC CHIP	0.1µF 25V
C1618	1-126-933-11	ELECT	100µF 20% 16V
C1619	1-164-156-11	CERAMIC CHIP	0.1µF 25V
C1620	1-162-920-11	CERAMIC CHIP	27pF 5% 50V
C1621	1-164-156-11	CERAMIC CHIP	0.1µF 25V
C1622	1-162-917-11	CERAMIC CHIP	15pF 5% 50V
C1623	1-162-915-11	CERAMIC CHIP	10pF 0.50pF 50V
C1624	1-162-915-11	CERAMIC CHIP	10pF 0.50pF 50V
C1625	1-164-156-11	CERAMIC CHIP	0.1µF 25V
C1626	1-164-156-11	CERAMIC CHIP	0.1µF 25V
C1627	1-164-156-11	CERAMIC CHIP	0.1µF 25V
C1628	1-164-156-11	CERAMIC CHIP	0.1µF 25V
C1629	1-164-156-11	CERAMIC CHIP	0.1µF 25V
C1630	1-164-156-11	CERAMIC CHIP	0.1µF 25V
C1631	1-126-933-11	ELECT	100µF 20% 16V
C1632	1-164-156-11	CERAMIC CHIP	0.1µF 25V
C1633	1-164-156-11	CERAMIC CHIP	0.1µF 25V
C1634	1-126-963-11	ELECT	4.7µF 20% 50V
C1635	1-162-923-11	CERAMIC CHIP	47pF 5% 50V
C1636	1-107-826-11	CERAMIC CHIP	0.1µF 10% 16V
C1637	1-162-919-11	CERAMIC CHIP	22pF 5% 50V
C1638	1-162-919-11	CERAMIC CHIP	22pF 5% 50V
C1639	1-126-933-11	ELECT	100µF 20% 16V
C1640	1-126-933-11	ELECT	100µF 20% 16V
C1641	1-164-156-11	CERAMIC CHIP	0.1µF 25V
C1643	1-164-156-11	CERAMIC CHIP	0.1µF 25V
C1644	1-164-156-11	CERAMIC CHIP	0.1µF 25V
C1645	1-164-315-11	CERAMIC CHIP	470pF 5% 50V
C1646	1-164-315-11	CERAMIC CHIP	470pF 5% 50V
C1647	1-163-137-00	CERAMIC CHIP	680pF 5% 50V
C1649	1-163-137-00	CERAMIC CHIP	680pF 5% 50V
C1651	1-164-156-11	CERAMIC CHIP	0.1µF 25V
C1652	1-164-156-11	CERAMIC CHIP	0.1µF 25V
C1656	1-164-156-11	CERAMIC CHIP	0.1µF 25V
C1657	1-164-156-11	CERAMIC CHIP	0.1µF 25V
C1658	1-164-156-11	CERAMIC CHIP	0.1µF 25V
C1659	1-164-156-11	CERAMIC CHIP	0.1µF 25V
C1661	1-164-156-11	CERAMIC CHIP	0.1µF 25V
C1663	1-126-933-11	ELECT	100µF 20% 16V
C1664	1-126-933-11	ELECT	100µF 20% 16V
C1665	1-126-933-11	ELECT	100µF 20% 16V
C1666	1-162-927-11	CERAMIC CHIP	100pF 5% 50V
C1668	1-162-927-11	CERAMIC CHIP	100pF 5% 50V
C1669	1-162-910-11	CERAMIC CHIP	5pF 0.25pF 50V
C1670	1-164-156-11	CERAMIC CHIP	0.1µF 25V
C1671	1-164-156-11	CERAMIC CHIP	0.1µF 25V
C1672	1-164-156-11	CERAMIC CHIP	0.1µF 25V
C1673	1-162-910-11	CERAMIC CHIP	5pF 0.25pF 50V
C1674	1-164-315-11	CERAMIC CHIP	470pF 5% 50V

AD

REF. NO.	PART NO.	DESCRIPTION	VALUES		
C1675	1-164-315-11	CERAMIC CHIP	470pF	5%	50V
C1676	1-163-137-00	CERAMIC CHIP	680pF	5%	50V
C1677	1-126-933-11	ELECT	100µF	20%	16V
C1678	1-163-137-00	CERAMIC CHIP	680pF	5%	50V
C1680	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C1681	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C1682	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C1683	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C1684	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C1685	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C1688	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C1690	1-162-927-11	CERAMIC CHIP	100pF	5%	50V
C1691	1-126-933-11	ELECT	100µF	20%	16V
C1692	1-126-933-11	ELECT	100µF	20%	16V
C1693	1-126-933-11	ELECT	100µF	20%	16V
C1694	1-162-927-11	CERAMIC CHIP	100pF	5%	50V
C1695	1-162-910-11	CERAMIC CHIP	5pF	0.25pF	50V
C1696	1-162-910-11	CERAMIC CHIP	5pF	0.25pF	50V
C1697	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C1698	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C1699	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C1700	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C1701	1-162-968-11	CERAMIC CHIP	0.0047µF	10%	50V
C1704	1-126-933-11	ELECT	100µF	20%	16V
C1707	1-164-315-11	CERAMIC CHIP	470pF	5%	50V
C1708	1-163-137-00	CERAMIC CHIP	680pF	5%	50V
C1709	1-164-315-11	CERAMIC CHIP	470pF	5%	50V
C1711	1-163-137-00	CERAMIC CHIP	680pF	5%	50V
C1712	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C1714	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C1715	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C1717	1-162-927-11	CERAMIC CHIP	100pF	5%	50V
C1718	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C1720	1-162-910-11	CERAMIC CHIP	5pF	0.25pF	50V
C1721	1-162-927-11	CERAMIC CHIP	100pF	5%	50V
C1722	1-162-910-11	CERAMIC CHIP	5pF	0.25pF	50V
C1730	1-126-916-11	ELECT	1000µF	20%	6.3V
C1731	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C1732	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C1733	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C1734	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V

REF. NO.	PART NO.	DESCRIPTION	VALUES
	CONNECTOR		
CN1601	1-573-301-21	CONNECTOR, BOARD TO BOARD 20P	
CN1602	1-573-301-21	CONNECTOR, BOARD TO BOARD 20P	
	DIODE		
D1601	8-719-988-61	DIODE	1SS355TE-17
D1603	8-719-988-61	DIODE	1SS355TE-17
D1604	8-719-069-54	DIODE	UDZSTE-175.1B
D1605	8-719-069-54	DIODE	UDZSTE-175.1B
D1606	8-719-069-54	DIODE	UDZSTE-175.1B
D1607	8-719-069-54	DIODE	UDZSTE-175.1B
D1691	8-719-988-61	DIODE	1SS355TE-17
D1692	8-719-988-61	DIODE	1SS355TE-17
D1693	8-719-988-61	DIODE	1SS355TE-17
	FERRITE BEAD		
FB1601	1-414-445-11	FERRITE	0µH
FB1602	1-414-445-11	FERRITE	0µH
FB1603	1-414-445-11	FERRITE	0µH
FB1604	1-414-445-11	FERRITE	0µH
FB1605	1-414-445-11	FERRITE	0µH
FB1606	1-414-445-11	FERRITE	0µH
FB1607	1-414-445-11	FERRITE	0µH
FB1608	1-414-445-11	FERRITE	0µH
FB1609	1-414-445-11	FERRITE	0µH
FB1610	1-414-445-11	FERRITE	0µH
FB1611	1-414-445-11	FERRITE	0µH
FB1612	1-414-445-11	FERRITE	0µH
FB1613	1-414-445-11	FERRITE	0µH
FB1614	1-414-445-11	FERRITE	0µH
FB1615	1-414-445-11	FERRITE	0µH
FB1616	1-414-445-11	FERRITE	0µH
FB1617	1-414-445-11	FERRITE	0µH
	IC		
IC1601	8-759-683-55	IC	CM0017AF
IC1602	8-759-830-08	IC	NJM2068V-TE2
IC1603	8-759-830-08	IC	NJM2068V-TE2
IC1605	8-759-352-91	IC	PST9143NL
IC1606	8-752-916-82	IC	CXP86448-646Q
IC1607	8-759-682-41	IC	M24C32-WMN6T(A)
IC1608	8-759-829-87	IC	CD0031AM
IC1609	8-759-830-08	IC	NJM2068V-TE2

REF. NO.	PART NO.	DESCRIPTION	VALUES		
IC1610	8-759-830-08	IC	NJM2068V-TE2		
IC1611	8-759-830-08	IC	NJM2068V-TE2		
IC1612	8-759-830-08	IC	NJM2068V-TE2		
	COIL				
L1601	1-469-555-21	INDUCTOR	10µH		
L1602	1-469-555-21	INDUCTOR	10µH		
	TRANSISTOR				
Q1603	8-729-120-28	TRANSISTOR	2SC1623-L5L6		
Q1604	8-729-120-28	TRANSISTOR	2SC1623-L5L6		
Q1605	8-729-120-28	TRANSISTOR	2SC1623-L5L6		
Q1606	8-729-120-28	TRANSISTOR	2SC1623-L5L6		
	RESISTOR				
R1600	1-216-833-11	METAL CHIP	10K	5%	1/10W
R1601	1-216-841-11	METAL CHIP	47K	5%	1/10W
R1604	1-216-833-11	METAL CHIP	10K	5%	1/10W
R1605	1-216-821-11	METAL CHIP	1K	5%	1/10W
R1606	1-216-821-11	METAL CHIP	1K	5%	1/10W
R1607	1-216-821-11	METAL CHIP	1K	5%	1/10W
R1608	1-216-809-11	METAL CHIP	100	5%	1/10W
R1609	1-216-809-11	METAL CHIP	100	5%	1/10W
R1611	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R1614	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R1615	1-216-821-11	METAL CHIP	1K	5%	1/10W
R1618	1-216-809-11	METAL CHIP	100	5%	1/10W
R1619	1-216-864-11	SHORT CHIP			
R1620	1-216-809-11	METAL CHIP	100	5%	1/10W
R1621	1-216-821-11	METAL CHIP	1K	5%	1/10W
R1622	1-216-817-11	METAL CHIP	470	5%	1/10W
R1623	1-216-821-11	METAL CHIP	1K	5%	1/10W
R1625	1-216-821-11	METAL CHIP	1K	5%	1/10W
R1627	1-216-821-11	METAL CHIP	1K	5%	1/10W
R1634	1-216-809-11	METAL CHIP	100	5%	1/10W
R1635	1-216-809-11	METAL CHIP	100	5%	1/10W
R1636	1-216-833-11	METAL CHIP	10K	5%	1/10W
R1637	1-216-821-11	METAL CHIP	1K	5%	1/10W
R1638	1-216-821-11	METAL CHIP	1K	5%	1/10W
R1639	1-216-809-11	METAL CHIP	100	5%	1/10W
R1641	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R1642	1-216-821-11	METAL CHIP	1K	5%	1/10W
R1643	1-216-821-11	METAL CHIP	1K	5%	1/10W
R1644	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R1645	1-216-815-11	METAL CHIP	330	5%	1/10W

REF. NO.	PART NO.	DESCRIPTION	VALUES		
R1646	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R1647	1-216-833-11	METAL CHIP	10K	5%	1/10W
R1648	1-216-809-11	METAL CHIP	100	5%	1/10W
R1649	1-216-809-11	METAL CHIP	100	5%	1/10W
R1650	1-216-815-11	METAL CHIP	330	5%	1/10W
R1651	1-216-815-11	METAL CHIP	330	5%	1/10W
R1652	1-216-821-11	METAL CHIP	1K	5%	1/10W
R1653	1-216-817-11	METAL CHIP	470	5%	1/10W
R1654	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R1655	1-218-700-11	METAL CHIP	2.2K	0.50%	1/10W
R1656	1-218-692-11	METAL CHIP	1K	0.50%	1/10W
R1657	1-216-821-11	METAL CHIP	1K	5%	1/10W
R1658	1-216-837-11	METAL CHIP	22K	5%	1/10W
R1659	1-216-837-11	METAL CHIP	22K	5%	1/10W
R1660	1-216-821-11	METAL CHIP	1K	5%	1/10W
R1661	1-216-821-11	METAL CHIP	1K	5%	1/10W
R1662	1-216-827-11	METAL CHIP	3.3K	5%	1/10W
R1663	1-216-818-11	METAL CHIP	560	5%	1/10W
R1665	1-218-700-11	METAL CHIP	2.2K	0.50%	1/10W
R1666	1-218-700-11	METAL CHIP	2.2K	0.50%	1/10W
R1667	1-218-700-11	METAL CHIP	2.2K	0.50%	1/10W
R1668	1-218-700-11	METAL CHIP	2.2K	0.50%	1/10W
R1669	1-218-724-11	METAL CHIP	22K	0.50%	1/10W
R1670	1-218-724-11	METAL CHIP	22K	0.50%	1/10W
R1671	1-218-724-11	METAL CHIP	22K	0.50%	1/10W
R1672	1-218-724-11	METAL CHIP	22K	0.50%	1/10W
R1673	1-218-716-11	METAL CHIP	10K	0.50%	1/10W
R1674	1-218-716-11	METAL CHIP	10K	0.50%	1/10W
R1675	1-218-716-11	METAL CHIP	10K	0.50%	1/10W
R1676	1-216-821-11	METAL CHIP	1K	5%	1/10W
R1681	1-218-716-11	METAL CHIP	10K	0.50%	1/10W
R1682	1-218-700-11	METAL CHIP	2.2K	0.50%	1/10W
R1683	1-218-700-11	METAL CHIP	2.2K	0.50%	1/10W
R1684	1-218-700-11	METAL CHIP	2.2K	0.50%	1/10W
R1685	1-218-700-11	METAL CHIP	2.2K	0.50%	1/10W
R1690	1-218-724-11	METAL CHIP	22K	0.50%	1/10W
R1691	1-218-724-11	METAL CHIP	22K	0.50%	1/10W
R1692	1-218-724-11	METAL CHIP	22K	0.50%	1/10W
R1693	1-218-724-11	METAL CHIP	22K	0.50%	1/10W
R1694	1-218-716-11	METAL CHIP	10K	0.50%	1/10W
R1695	1-218-716-11	METAL CHIP	10K	0.50%	1/10W
R1696	1-218-716-11	METAL CHIP	10K	0.50%	1/10W
R1697	1-218-716-11	METAL CHIP	10K	0.50%	1/10W

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REF. NO.	PART NO.	DESCRIPTION	VALUES		
R1698	1-218-700-11	METAL CHIP	2.2K	0.50%	1/10W
R1699	1-218-700-11	METAL CHIP	2.2K	0.50%	1/10W
R1700	1-218-700-11	METAL CHIP	2.2K	0.50%	1/10W
R1701	1-218-700-11	METAL CHIP	2.2K	0.50%	1/10W
R1702	1-218-724-11	METAL CHIP	22K	0.50%	1/10W
R1703	1-218-724-11	METAL CHIP	22K	0.50%	1/10W
R1704	1-218-724-11	METAL CHIP	22K	0.50%	1/10W
R1705	1-218-716-11	METAL CHIP	10K	0.50%	1/10W
R1706	1-218-724-11	METAL CHIP	22K	0.50%	1/10W
R1707	1-218-716-11	METAL CHIP	10K	0.50%	1/10W
R1708	1-218-716-11	METAL CHIP	10K	0.50%	1/10W
R1709	1-218-716-11	METAL CHIP	10K	0.50%	1/10W
R1710	1-216-864-11	SHORT CHIP			
R1711	1-216-833-11	METAL CHIP	10K	5%	1/10W
R1712	1-216-833-11	METAL CHIP	10K	5%	1/10W
R1713	1-216-833-11	METAL CHIP	10K	5%	1/10W
R1714	1-216-833-11	METAL CHIP	10K	5%	1/10W
	RESISTOR BRIDGE				
RB1603	1-233-576-11	RES, CHIP NETWORK	100		
RB1604	1-233-576-11	RES, CHIP NETWORK	100		
RB1605	1-233-576-11	RES, CHIP NETWORK	100		
	CRYSTAL				
X1601	1-767-925-21	VIBRATOR, CRYSTAL			

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	A-1300-550-A	**A BOARD, COMPLETE**			
	4-382-854-11	SCREW (M3X10), P, SW (+)			
*	7-651-000-50	GREASE,SILICON (G-746) 200G			
	CAPACITOR				
C1	1-126-933-11	ELECT	100µF	20%	16V
C2	1-104-665-11	ELECT	100µF	20%	25V
C3	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C4	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C5	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C6	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C7	1-126-933-11	ELECT	100µF	20%	16V
C8	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C9	1-115-416-11	CERAMIC CHIP	0.001µF	5%	25V
C10	1-162-974-11	CERAMIC CHIP	0.01µF		50V
C11	1-126-933-11	ELECT	100µF	20%	16V
C12	1-126-933-11	ELECT	100µF	20%	16V
C13	1-164-392-11	CERAMIC CHIP	390pF	5%	50V
C14	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C15	1-164-392-11	CERAMIC CHIP	390pF	5%	50V
C16	1-162-927-11	CERAMIC CHIP	100pF	5%	50V
C17	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C18	1-162-975-11	CERAMIC CHIP	24pF	5%	50V
C19	1-162-975-11	CERAMIC CHIP	24pF	5%	50V
C20	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C21	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C22	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C23	1-162-974-11	CERAMIC CHIP	0.01µF		50V
C24	1-126-947-11	ELECT	47µF	20%	35V
C26	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C27	1-126-947-11	ELECT	47µF	20%	35V
C28	1-162-974-11	CERAMIC CHIP	0.01µF		50V
C29	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C30	1-162-974-11	CERAMIC CHIP	0.01µF		50V
C31	1-126-947-11	ELECT	47µF	20%	35V
C33	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C34	1-162-974-11	CERAMIC CHIP	0.01µF		50V
C35	1-126-947-11	ELECT	47µF	20%	35V
C36	1-126-934-11	ELECT	220µF	20%	16V
C37	1-162-974-11	CERAMIC CHIP	0.01µF		50V
C38	1-162-974-11	CERAMIC CHIP	0.01µF		50V
C39	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C40	1-162-974-11	CERAMIC CHIP	0.01µF		50V
C41	1-126-934-11	ELECT	220µF	20%	16V
C42	1-162-974-11	CERAMIC CHIP	0.01µF		50V
C43	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C44	1-126-947-11	ELECT	47µF	20%	35V
C45	1-162-968-11	CERAMIC CHIP	0.0047µF	10%	50V
C46	1-162-974-11	CERAMIC CHIP	0.01µF		50V
C47	1-162-968-11	CERAMIC CHIP	0.0047µF	10%	50V
C49	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C50	1-162-917-11	CERAMIC CHIP	15pF	5%	50V
C51	1-126-947-11	ELECT	47µF	20%	35V
C52	1-162-974-11	CERAMIC CHIP	0.01µF		50V
C53	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C54	1-162-968-11	CERAMIC CHIP	0.0047µF	10%	50V
C55	1-162-968-11	CERAMIC CHIP	0.0047µF	10%	50V
C56	1-164-156-11	CERAMIC CHIP	0.1µF		25V

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REF. NO.	PART NO.	DESCRIPTION	VALUES		
C57	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C59	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C60	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C61	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C62	1-126-947-11	ELECT	47µF	20%	35V
C63	1-126-935-11	ELECT	470µF	20%	16V
C65	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C66	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C67	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C68	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C69	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C70	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C73	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C74	1-126-964-11	ELECT	10µF	20%	50V
C75	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C76	1-162-966-11	CERAMIC CHIP	0.0022µF	10%	50V
C77	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C78	1-104-665-11	ELECT	100µF	20%	25V
C79	1-126-933-11	ELECT	100µF	20%	16V
C80	1-126-967-11	ELECT	47µF	20%	50V
C81	1-104-665-11	ELECT	100µF	20%	25V
C82	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C83	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C84	1-126-933-11	ELECT	100µF	20%	16V
C85	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C86	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C87	1-126-960-11	ELECT	1µF	20%	50V
C88	1-126-933-11	ELECT	100µF	20%	16V
C90	1-126-964-11	ELECT	10µF	20%	50V
C92	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C93	1-126-964-11	ELECT	10µF	20%	50V
C94	1-164-346-11	CERAMIC CHIP	1µF		16V
C95	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C96	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C97	1-164-315-11	CERAMIC CHIP	470pF	5%	50V
C98	1-126-960-11	ELECT	1µF	20%	50V
C99	1-165-176-11	CERAMIC CHIP	0.047µF	10%	16V
C101	1-162-960-11	CERAMIC CHIP	220pF	10%	50V
C102	1-126-964-11	ELECT	10µF	20%	50V
C103	1-126-964-11	ELECT	10µF	20%	50V
C104	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C105	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C106	1-126-933-11	ELECT	100µF	20%	16V
C108	1-162-917-11	CERAMIC CHIP	15pF	5%	50V
C109	1-162-917-11	CERAMIC CHIP	15pF	5%	50V
C110	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C111	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C112	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C113	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C115	1-162-917-11	CERAMIC CHIP	15pF	5%	50V
C116	1-162-917-11	CERAMIC CHIP	15pF	5%	50V
C119	1-126-933-11	ELECT	100µF	20%	16V
C120	1-126-933-11	ELECT	100µF	20%	16V
C123	1-162-966-11	CERAMIC CHIP	0.0022µF	10%	50V
C124	1-164-346-11	CERAMIC CHIP	1µF		16V
C125	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C128	1-162-960-11	CERAMIC CHIP	220pF	10%	50V
C129	1-165-176-11	CERAMIC CHIP	0.047µF	10%	16V
C130	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C131	1-126-961-11	ELECT	2.2µF	20%	50V
C132	1-126-935-11	ELECT	470µF	20%	16V
C133	1-126-964-11	ELECT	10µF	20%	50V
C134	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C135	1-126-964-11	ELECT	10µF	20%	50V
C136	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C137	1-126-964-11	ELECT	10µF	20%	50V
C138	1-126-964-11	ELECT	10µF	20%	50V
C139	1-126-964-11	ELECT	10µF	20%	50V
C140	1-126-933-11	ELECT	100µF	20%	16V
C141	1-126-933-11	ELECT	100µF	20%	16V
C142	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C143	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C144	1-126-964-11	ELECT	10µF	20%	50V
C145	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C148	1-104-665-11	ELECT	100µF	20%	25V
C149	1-126-933-11	ELECT	100µF	20%	16V
C150	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C151	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C301	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C302	1-125-837-91	CERAMIC CHIP	1µF	10%	6.3V
C303	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C304	1-164-315-11	CERAMIC CHIP	470pF	5%	50V
C305	1-162-917-11	CERAMIC CHIP	15pF	5%	50V
C306	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C307	1-164-156-11	CERAMIC CHIP	0.1µF		25V

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REF. NO.	PART NO.	DESCRIPTION	VALUES		
C308	1-125-891-11	CERAMIC CHIP	0.47µF	10%	10V
C309	1-126-933-11	ELECT	100µF	20%	16V
C310	1-126-964-11	ELECT	10µF	20%	50V
C311	1-126-933-11	ELECT	100µF	20%	16V
C312	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C313	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C314	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C315	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C316	1-162-964-11	CERAMIC CHIP	0.001µF	10%	50V
C317	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C318	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C319	1-125-891-11	CERAMIC CHIP	0.47µF	10%	10V
C320	1-126-963-11	ELECT	4.7µF	20%	50V
C321	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C322	1-126-933-11	ELECT	100µF	20%	16V
C323	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C324	1-125-837-91	CERAMIC CHIP	1µF	10%	6.3V
C325	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C326	1-164-315-11	CERAMIC CHIP	470pF	5%	50V
C327	1-162-917-11	CERAMIC CHIP	15pF	5%	50V
C328	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C329	1-125-891-11	CERAMIC CHIP	0.47µF	10%	10V
C330	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C331	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C332	1-126-964-11	ELECT	10µF	20%	50V
C333	1-125-891-11	CERAMIC CHIP	0.47µF	10%	10V
C334	1-125-891-11	CERAMIC CHIP	0.47µF	10%	10V
C335	1-126-933-11	ELECT	100µF	20%	16V
C336	1-125-891-11	CERAMIC CHIP	0.47µF	10%	10V
C337	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C338	1-126-963-11	ELECT	4.7µF	20%	50V
C339	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C340	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C341	1-162-968-11	CERAMIC CHIP	0.0047µF	10%	50V
C342	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C343	1-126-963-11	ELECT	4.7µF	20%	50V
C344	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C345	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C346	1-125-891-11	CERAMIC CHIP	0.47µF	10%	10V
C347	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C348	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C349	1-125-891-11	CERAMIC CHIP	0.47µF	10%	10V

REF. NO.	PART NO.	DESCRIPTION	VALUES		
C350	1-126-935-11	ELECT	470µF	20%	16V
C351	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C352	1-125-891-11	CERAMIC CHIP	0.47µF	10%	10V
C353	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C354	1-126-963-11	ELECT	4.7µF	20%	50V
C355	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C356	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C357	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C358	1-162-917-11	CERAMIC CHIP	15pF	5%	50V
C359	1-125-891-11	CERAMIC CHIP	0.47µF	10%	10V
C360	1-162-917-11	CERAMIC CHIP	15pF	5%	50V
C361	1-125-891-11	CERAMIC CHIP	0.47µF	10%	10V
C362	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C363	1-126-933-11	ELECT	100µF	20%	16V
C364	1-126-933-11	ELECT	100µF	20%	16V
C365	1-126-933-11	ELECT	100µF	20%	16V
C366	1-125-837-91	CERAMIC CHIP	1µF	10%	6.3V
C367	1-125-837-91	CERAMIC CHIP	1µF	10%	6.3V
C368	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C369	1-126-933-11	ELECT	100µF	20%	16V
C370	1-126-933-11	ELECT	100µF	20%	16V
C371	1-126-933-11	ELECT	100µF	20%	16V
C372	1-126-933-11	ELECT	100µF	20%	16V
C373	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C374	1-126-933-11	ELECT	100µF	20%	16V
C375	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C376	1-125-891-11	CERAMIC CHIP	0.47µF	10%	10V
C377	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C378	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C379	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C380	1-162-964-11	CERAMIC CHIP	0.001µF	10%	50V
C381	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C382	1-125-891-11	CERAMIC CHIP	0.47µF	10%	10V
C383	1-125-891-11	CERAMIC CHIP	0.47µF	10%	10V
C384	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C385	1-162-968-11	CERAMIC CHIP	0.0047µF	10%	50V
C386	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C387	1-126-964-11	ELECT	10µF	20%	50V
C388	1-125-891-11	CERAMIC CHIP	0.47µF	10%	10V
C389	1-125-891-11	CERAMIC CHIP	0.47µF	10%	10V
C390	1-126-964-11	ELECT	10µF	20%	50V
C391	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C392	1-125-891-11	CERAMIC CHIP	0.47µF	10%	10V

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REF. NO.	PART NO.	DESCRIPTION	VALUES		
C393	1-125-891-11	CERAMIC CHIP	0.47µF	10%	10V
C394	1-126-933-11	ELECT	100µF	20%	16V
C395	1-125-891-11	CERAMIC CHIP	0.47µF	10%	10V
C396	1-125-891-11	CERAMIC CHIP	0.47µF	10%	10V
C397	1-125-891-11	CERAMIC CHIP	0.47µF	10%	10V
C398	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C399	1-162-917-11	CERAMIC CHIP	15pF	5%	50V
C400	1-126-933-11	ELECT	100µF	20%	16V
C401	1-162-917-11	CERAMIC CHIP	15pF	5%	50V
C402	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C403	1-126-947-11	ELECT	47µF	20%	35V
C404	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C405	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C406	1-127-760-11	CERAMIC CHIP	4.7µF	10%	6.3V
C407	1-127-760-11	CERAMIC CHIP	4.7µF	10%	6.3V
C408	1-127-760-11	CERAMIC CHIP	4.7µF	10%	6.3V
C410	1-126-934-11	ELECT	220µF	20%	16V
C411	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C412	1-125-837-91	CERAMIC CHIP	1µF	10%	6.3V
C413	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C414	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C415	1-125-837-91	CERAMIC CHIP	1µF	10%	6.3V
C416	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C417	1-126-933-11	ELECT	100µF	20%	16V
C418	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C419	1-126-933-11	ELECT	100µF	20%	16V
C420	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C421	1-162-964-11	CERAMIC CHIP	0.001µF	10%	50V
C422	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C423	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C426	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C427	1-125-891-11	CERAMIC CHIP	0.47µF	10%	10V
C430	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C431	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C435	1-126-933-11	ELECT	100µF	20%	16V
C438	1-126-933-11	ELECT	100µF	20%	16V
C439	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C440	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C442	1-135-834-91	CERAMIC CHIP	2.2E+06pF		6.3V
C443	1-126-933-11	ELECT	100µF	20%	16V
C444	1-110-563-11	CERAMIC CHIP	0.068µF	10%	16V
C449	1-125-837-91	CERAMIC CHIP	1µF	10%	6.3V

REF. NO.	PART NO.	DESCRIPTION	VALUES		
C455	1-130-495-00	MYLAR	0.1µF	5%	50V
C457	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C458	1-136-244-11	FILM	0.1µF	2.00%	50V
C460	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C461	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C463	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C464	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C466	1-162-923-11	CERAMIC CHIP	47pF	5%	50V
C467	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C468	1-125-891-11	CERAMIC CHIP	0.47µF	10%	10V
C470	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C472	1-125-891-11	CERAMIC CHIP	0.47µF	10%	10V
C476	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C477	1-127-760-11	CERAMIC CHIP	4.7µF	10%	6.3V
C478	1-216-864-11	SHORT CHIP			
C479	1-162-923-11	CERAMIC CHIP	47pF	5%	50V
C480	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C481	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C482	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C483	1-162-968-11	CERAMIC CHIP	0.0047µF	10%	50V
C484	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C485	1-125-891-11	CERAMIC CHIP	0.47µF	10%	10V
C486	1-115-467-11	CERAMIC CHIP	0.22µF	10%	10V
C487	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C488	1-126-933-11	ELECT	100µF	20%	16V
C489	1-125-891-11	CERAMIC CHIP	0.47µF	10%	10V
C490	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C494	1-126-933-11	ELECT	100µF	20%	16V
C495	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C497	1-126-933-11	ELECT	100µF	20%	16V
C498	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C500	1-164-816-11	CERAMIC CHIP	220pF	2.00%	50V
C501	1-162-974-11	CERAMIC CHIP	0.01µF		50V
C502	1-164-816-11	CERAMIC CHIP	220pF	2.00%	50V
C503	1-164-816-11	CERAMIC CHIP	220pF	2.00%	50V
C504	1-115-416-11	CERAMIC CHIP	0.001µF	5%	25V
C505	1-162-964-11	CERAMIC CHIP	0.001µF	10%	50V
C506	1-164-816-11	CERAMIC CHIP	220pF	2.00%	50V
C507	1-162-966-11	CERAMIC CHIP	0.0022µF	10%	50V
C701	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C702	1-126-964-11	ELECT	10µF	20%	50V
C703	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C704	1-126-947-11	ELECT	47µF	20%	35V

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REF. NO.	PART NO.	DESCRIPTION	VALUES		
C705	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C706	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C707	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C708	1-104-665-11	ELECT	100µF	20%	25V
C709	1-162-920-11	CERAMIC CHIP	27pF	5%	50V
C710	1-162-919-11	CERAMIC CHIP	22pF	5%	50V
C713	1-162-917-11	CERAMIC CHIP	15pF	5%	50V
C714	1-162-917-11	CERAMIC CHIP	15pF	5%	50V
C719	1-162-964-11	CERAMIC CHIP	0.001µF	10%	50V
C722	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C728	1-126-933-11	ELECT	100µF	20%	16V
C730	1-162-915-11	CERAMIC CHIP	10pF	0.50pF	50V
C731	1-162-927-11	CERAMIC CHIP	100pF	5%	50V
C732	1-162-927-11	CERAMIC CHIP	100pF	5%	50V
C733	1-115-416-11	CERAMIC CHIP	0.001µF	5%	25V
C739	1-126-963-11	ELECT	4.7µF	20%	50V
C740	1-126-963-11	ELECT	4.7µF	20%	50V
C741	1-126-963-11	ELECT	4.7µF	20%	50V
C745	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C746	1-126-947-11	ELECT	47µF	20%	35V
C747	1-126-947-11	ELECT	47µF	20%	35V
C749	1-126-947-11	ELECT	47µF	20%	35V
C751	1-126-943-11	ELECT	2200µF	20%	25V
C752	1-126-943-11	ELECT	2200µF	20%	25V
C755	1-126-947-11	ELECT	47µF	20%	35V
C756	1-126-964-11	ELECT	10µF	20%	50V
C757	1-130-495-00	MYLAR	0.1µF	5%	50V
C758	1-126-947-11	ELECT	47µF	20%	35V
C759	1-164-227-11	CERAMIC CHIP	0.022µF	10%	25V
C761	1-164-227-11	CERAMIC CHIP	0.022µF	10%	25V
C762	1-104-665-11	ELECT	100µF	20%	25V
C764	1-130-495-00	MYLAR	0.1µF	5%	50V
C765	1-126-933-11	ELECT	100µF	20%	16V
C771	1-130-495-00	MYLAR	0.1µF	5%	50V
C772	1-130-495-00	MYLAR	0.1µF	5%	50V
C773	1-164-677-11	CERAMIC CHIP	0.033µF	10%	16V
C775	1-162-967-11	CERAMIC CHIP	0.0033µF	10%	50V
C780	1-104-665-11	ELECT	100µF	20%	25V
C782	1-130-489-00	MYLAR	0.033µF	5%	50V
C783	1-130-471-00	MYLAR	0.001µF	5%	50V
C784	1-125-891-11	CERAMIC CHIP	0.47µF	10%	10V
C785	1-126-963-11	ELECT	4.7µF	20%	50V

REF. NO.	PART NO.	DESCRIPTION	VALUES		
C786	1-126-963-11	ELECT	4.7µF	20%	50V
C787	1-126-960-11	ELECT	1µF	20%	50V
C788	1-165-176-11	CERAMIC CHIP	0.047µF	10%	16V
C789	1-126-964-11	ELECT	10µF	20%	50V
C790	1-164-677-11	CERAMIC CHIP	0.033µF	10%	16V
C791	1-162-967-11	CERAMIC CHIP	0.0033µF	10%	50V
C792	1-130-489-00	MYLAR	0.033µF	5%	50V
C793	1-130-471-00	MYLAR	0.001µF	5%	50V
C794	1-125-891-11	CERAMIC CHIP	0.47µF	10%	10V
C795	1-126-963-11	ELECT	4.7µF	20%	50V
C796	1-126-933-11	ELECT	100µF	20%	16V
C797	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C799	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C800	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C801	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C802	1-126-935-11	ELECT	470µF	20%	16V
C810	1-126-947-11	ELECT	47µF	20%	35V

CONNECTOR

*	CN1	1-779-892-11	CONNECTOR, BOARD TO BOARD 10P
*	CN2	1-779-892-11	CONNECTOR, BOARD TO BOARD 10P
*	CN3	1-779-892-11	CONNECTOR, BOARD TO BOARD 10P
*	CN4	1-564-510-11	PLUG, CONNECTOR 7P
	CN5	1-573-979-21	CONNECTOR, BOARD TO BOARD 11P
*	CN6	1-793-922-11	CONNECTOR, DIN (RECEPTACLE) 64P
*	CN7	1-564-508-11	PLUG, CONNECTOR 5P
	CN8	1-695-915-11	TAB (CONTACT)
*	CN9	1-564-509-11	PLUG, CONNECTOR 6P
*	CN10	1-564-511-11	PLUG, CONNECTOR 8P
	CN11	1-573-298-21	CONNECTOR, BOARD TO BOARD 20P
	CN12	1-573-298-21	CONNECTOR, BOARD TO BOARD 20P
*	CN13	1-793-922-11	CONNECTOR, DIN (RECEPTACLE) 64P
*	CN14	1-779-892-11	CONNECTOR, BOARD TO BOARD 10P
	CN15	1-695-915-11	TAB (CONTACT)
*	CN16	1-564-506-11	PLUG, CONNECTOR 3P
*	CN17	1-564-508-11	PLUG, CONNECTOR 5P
*	CN18	1-564-508-11	PLUG, CONNECTOR 5P
*	CN19	1-564-508-11	PLUG, CONNECTOR 5P
	CN21	1-695-915-11	TAB (CONTACT)
	CN22	1-695-915-11	TAB (CONTACT)
*	CN23	1-564-507-11	PLUG, CONNECTOR 4P
*	CN24	1-564-510-11	PLUG, CONNECTOR 7P
*	CN701	1-564-507-11	PLUG, CONNECTOR 4P
*	CN702	1-564-509-11	PLUG, CONNECTOR 6P

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	REF. NO.	PART NO.	DESCRIPTION	VALUES
*	CN703	1-564-509-11	PLUG, CONNECTOR	6P
*	CN704	1-564-509-11	PLUG, CONNECTOR	6P
*	CN705	1-564-507-11	PLUG, CONNECTOR	4P
*	CN706	1-564-507-11	PLUG, CONNECTOR	4P
		DIODE		
	D1	8-719-404-50	DIODE	MA111-TX
	D5	8-719-083-87	DIODE	UDZS-TE17-33B
	D7	8-719-069-55	DIODE	UDZSTE-175.6B
	D307	8-719-978-33	DIODE	DTZ-TT11-6.8B
	D312	8-719-069-55	DIODE	UDZSTE-175.6B
	D317	8-719-404-50	DIODE	MA111-TX
	D318	8-719-404-50	DIODE	MA111-TX
	D319	8-719-404-50	DIODE	MA111-TX
	D321	8-719-404-50	DIODE	MA111-TX
	D701	8-719-082-05	DIODE	M1MA142WKT1
	D702	8-719-404-50	DIODE	MA111-TX
	D703	8-719-083-57	DIODE	UDZSTE-173.6B
	D704	8-719-082-05	DIODE	M1MA142WKT1
	D705	8-719-083-87	DIODE	UDZS-TE17-33B
	D706	8-719-083-87	DIODE	UDZS-TE17-33B
	D708	8-719-404-50	DIODE	MA111-TX
	D709	8-719-404-50	DIODE	MA111-TX
	D710	8-719-082-05	DIODE	M1MA142WKT1
	D711	8-719-082-05	DIODE	M1MA142WKT1
	D712	8-719-082-05	DIODE	M1MA142WKT1
	D713	8-719-082-05	DIODE	M1MA142WKT1
	D718	8-719-404-50	DIODE	MA111-TX
	D719	8-719-404-50	DIODE	MA111-TX
	D720	8-719-920-67	DIODE	ERC91-02
	D721	8-719-920-67	DIODE	ERC91-02
	D723	8-719-083-85	DIODE	UDZS-TE17-22B
	D724	8-719-083-85	DIODE	UDZS-TE17-22B
	D725	8-719-083-85	DIODE	UDZS-TE17-22B
	D726	8-719-083-85	DIODE	UDZS-TE17-22B
	D729	8-719-404-50	DIODE	MA111-TX
		FERRITE BEAD		
	FB1	1-414-445-11	FERRITE	0µH
	FB2	1-414-445-11	FERRITE	0µH
	FB3	1-414-445-11	FERRITE	0µH
	FB4	1-414-445-11	FERRITE	0µH
	FB5	1-216-295-91	SHORT CHIP	
	FB6	1-414-445-11	FERRITE	0µH
	FB301	1-414-760-21	FERRITE	0µH

REF. NO.	PART NO.	DESCRIPTION	VALUES
	FILTER		
FL3	1-233-512-21	FERRITE	37µH
FL4	1-239-848-21	FILTER, LOW PASS	
FL5	1-239-848-21	FILTER, LOW PASS	
FL6	1-239-848-21	FILTER, LOW PASS	
FL7	1-239-848-21	FILTER, LOW PASS	
	IC		
IC1	8-759-647-10	IC	UPC2933HF
IC2	8-759-653-07	IC	PQ09RD21
IC3	8-759-830-08	IC	NJM2068V-TE2
IC4	6-702-698-01	IC	M11B416256AC-35J(T)
IC5	8-759-100-96	IC	UPC4558G2
IC6	8-759-594-44	IC	UPD64082GF-3BA
IC7	8-759-100-96	IC	UPC4558G2
IC8	8-759-647-10	IC	UPC2933HF
IC9	8-759-701-79	IC	NJM7812FA
IC10	8-759-100-96	IC	UPC4558G2
IC11	8-759-100-96	IC	UPC4558G2
IC12	6-700-898-01	IC	PQ05RD21
IC13	8-759-647-11	IC	UPC2905HF
IC301	8-752-102-21	IC	CXA2103AQ
IC302	8-752-916-40	IC	CXP85840A-039Q
IC303	8-752-102-21	IC	CXA2103AQ
IC304	8-752-916-40	IC	CXP85840A-039Q
IC305	8-759-595-97	IC	SN74LV4053ANSR
IC306	8-752-103-44	IC	CXA2171Q
IC307	8-759-595-97	IC	SN74LV4053ANSR
IC308	8-752-395-13	IC	CXD2085M-T4
IC309	8-752-100-25	IC	CXA2150AQ
IC310	8-759-349-11	IC	PST9145NL
IC311	8-759-700-07	IC	NJM2903M
IC312	8-759-082-58	IC	TC7W08FU
IC701	8-759-349-11	IC	PST9145NL
IC702	6-700-149-01	IC	M24C04-MN6T(A)
IC703	8-759-575-72	IC	M24C08-WMN6T
IC704	6-802-317-01	IC	M306V2ME-202FP
IC707	8-759-100-96	IC	UPC4558G2
IC708	8-759-190-89	IC	TDA7265
IC711	8-759-690-57	IC	BH3868BFS-E2
	CHIP CONDUCTOR		
JR001	1-216-864-11	SHORT CHIP	

NOTE: The components identified by shading and ⚠ mark are critical for safety. Replace only with part number specified.

NOTE: Les composants identifies per un trame et une marque ⚠ sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

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REF. NO.	PART NO.	DESCRIPTION	VALUES
	COIL		
L1	1-414-181-11	INDUCTOR	4.7µH
L2	1-469-555-21	INDUCTOR	10µH
L3	1-469-555-21	INDUCTOR	10µH
L4	1-469-555-21	INDUCTOR	10µH
L5	1-414-193-41	INDUCTOR	220µH
L6	1-469-555-21	INDUCTOR	10µH
L7	1-414-856-11	INDUCTOR	10µH
L8	1-414-856-11	INDUCTOR	10µH
L9	1-414-856-11	INDUCTOR	10µH
L10	1-412-537-31	INDUCTOR	100µH
L11	1-414-856-11	INDUCTOR	10µH
L12	1-414-856-11	INDUCTOR	10µH
L13	1-414-856-11	INDUCTOR	10µH
L301	1-469-555-21	INDUCTOR	10µH
L302	1-469-555-21	INDUCTOR	10µH
L303	1-469-555-21	INDUCTOR	10µH
L304	1-469-555-21	INDUCTOR	10µH
L305	1-469-555-21	INDUCTOR	10µH
L306	1-414-193-41	INDUCTOR	220µH
L307	1-469-555-21	INDUCTOR	10µH
L308	1-414-856-11	INDUCTOR	10µH
L309	1-469-555-21	INDUCTOR	10µH
L310	1-469-555-21	INDUCTOR	10µH
L311	1-469-555-21	INDUCTOR	10µH
L312	1-469-555-21	INDUCTOR	10µH
L313	1-414-856-11	INDUCTOR	10µH
L314	1-469-555-21	INDUCTOR	10µH
L315	1-469-555-21	INDUCTOR	10µH
L316	1-414-856-11	INDUCTOR	10µH
L317	1-414-856-11	INDUCTOR	10µH
L318	1-469-555-21	INDUCTOR	10µH
L321	1-414-856-11	INDUCTOR	10µH
L701	1-414-179-21	INDUCTOR	2.2µH
L702	1-412-911-11	FERRITE	0µH
	IC LINK		
⚠ PS1	1-532-679-00	IC	LINK 0.6A 50V
⚠ PS2	1-532-685-00	IC	LINK 0.8A 50V
⚠ PS3	1-532-679-00	IC	LINK 0.6A 50V
⚠ PS701	1-576-336-21	IC	LINK 2A 50V
⚠ PS702	1-576-336-21	IC	LINK 2A 50V

REF. NO.	PART NO.	DESCRIPTION	VALUES
	TRANSISTOR		
Q1	8-729-424-02	TRANSISTOR	2SB709A-QRS-TX
Q2	8-729-424-02	TRANSISTOR	2SB709A-QRS-TX
Q3	8-729-422-27	TRANSISTOR	2SD601A-Q
Q4	8-729-424-02	TRANSISTOR	2SB709A-QRS-TX
Q5	8-729-422-27	TRANSISTOR	2SD601A-Q
Q6	8-729-422-27	TRANSISTOR	2SD601A-Q
Q7	8-729-424-02	TRANSISTOR	2SB709A-QRS-TX
Q8	8-729-424-02	TRANSISTOR	2SB709A-QRS-TX
Q11	8-729-422-27	TRANSISTOR	2SD601A-Q
Q12	8-729-424-02	TRANSISTOR	2SB709A-QRS-TX
Q13	8-729-424-02	TRANSISTOR	2SB709A-QRS-TX
Q14	8-729-422-27	TRANSISTOR	2SD601A-Q
Q15	8-729-424-02	TRANSISTOR	2SB709A-QRS-TX
Q16	8-729-424-02	TRANSISTOR	2SB709A-QRS-TX
Q17	8-729-422-27	TRANSISTOR	2SD601A-Q
Q18	8-729-422-27	TRANSISTOR	2SD601A-Q
Q19	8-729-422-27	TRANSISTOR	2SD601A-Q
Q20	8-729-422-27	TRANSISTOR	2SD601A-Q
Q21	8-729-424-02	TRANSISTOR	2SB709A-QRS-TX
Q22	8-729-422-27	TRANSISTOR	2SD601A-Q
Q23	8-729-422-27	TRANSISTOR	2SD601A-Q
Q24	8-729-422-27	TRANSISTOR	2SD601A-Q
Q25	8-729-422-27	TRANSISTOR	2SD601A-Q
Q26	8-729-422-27	TRANSISTOR	2SD601A-Q
Q27	8-729-422-27	TRANSISTOR	2SD601A-Q
Q28	8-729-424-02	TRANSISTOR	2SB709A-QRS-TX
Q30	1-801-806-11	TRANSISTOR	DTC144EKA
Q301	8-729-422-27	TRANSISTOR	2SD601A-Q
Q302	8-729-422-27	TRANSISTOR	2SD601A-Q
Q303	8-729-424-02	TRANSISTOR	2SB709A-QRS-TX
Q304	8-729-422-27	TRANSISTOR	2SD601A-Q
Q305	8-729-422-27	TRANSISTOR	2SD601A-Q
Q306	8-729-422-27	TRANSISTOR	2SD601A-Q
Q307	8-729-422-27	TRANSISTOR	2SD601A-Q
Q308	8-729-424-02	TRANSISTOR	2SB709A-QRS-TX
Q309	8-729-422-27	TRANSISTOR	2SD601A-Q
Q310	8-729-422-27	TRANSISTOR	2SD601A-Q
Q311	8-729-422-27	TRANSISTOR	2SD601A-Q
Q312	8-729-424-02	TRANSISTOR	2SB709A-QRS-TX
Q313	8-729-422-27	TRANSISTOR	2SD601A-Q
Q314	8-729-422-27	TRANSISTOR	2SD601A-Q
Q315	8-729-422-27	TRANSISTOR	2SD601A-Q

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REF. NO.	PART NO.	DESCRIPTION	VALUES
Q316	8-729-422-27	TRANSISTOR	2SD601A-Q
Q317	8-729-422-27	TRANSISTOR	2SD601A-Q
Q318	8-729-422-27	TRANSISTOR	2SD601A-Q
Q319	8-729-422-27	TRANSISTOR	2SD601A-Q
Q320	8-729-422-27	TRANSISTOR	2SD601A-Q
Q321	8-729-422-27	TRANSISTOR	2SD601A-Q
Q322	8-729-422-27	TRANSISTOR	2SD601A-Q
Q323	8-729-422-27	TRANSISTOR	2SD601A-Q
Q324	8-729-422-27	TRANSISTOR	2SD601A-Q
Q325	8-729-424-02	TRANSISTOR	2SB709A-QRS-TX
Q326	8-729-424-02	TRANSISTOR	2SB709A-QRS-TX
Q327	8-729-424-02	TRANSISTOR	2SB709A-QRS-TX
Q328	8-729-424-02	TRANSISTOR	2SB709A-QRS-TX
Q329	8-729-424-02	TRANSISTOR	2SB709A-QRS-TX
Q330	8-729-424-02	TRANSISTOR	2SB709A-QRS-TX
Q331	8-729-424-02	TRANSISTOR	2SB709A-QRS-TX
Q332	8-729-424-02	TRANSISTOR	2SB709A-QRS-TX
Q333	8-729-424-02	TRANSISTOR	2SB709A-QRS-TX
Q334	8-729-424-02	TRANSISTOR	2SB709A-QRS-TX
Q335	8-729-422-27	TRANSISTOR	2SD601A-Q
Q336	8-729-422-27	TRANSISTOR	2SD601A-Q
Q337	8-729-422-27	TRANSISTOR	2SD601A-Q
Q338	8-729-422-27	TRANSISTOR	2SD601A-Q
Q339	8-729-422-27	TRANSISTOR	2SD601A-Q
Q340	8-729-422-27	TRANSISTOR	2SD601A-Q
Q341	8-729-422-27	TRANSISTOR	2SD601A-Q
Q342	8-729-422-27	TRANSISTOR	2SD601A-Q
Q343	8-729-122-63	TRANSISTOR	2SA1226-E4
Q344	8-729-424-02	TRANSISTOR	2SB709A-QRS-TX
Q345	8-729-424-02	TRANSISTOR	2SB709A-QRS-TX
Q346	8-729-422-27	TRANSISTOR	2SD601A-Q
Q347	8-729-122-63	TRANSISTOR	2SA1226-E4
Q348	8-729-424-02	TRANSISTOR	2SB709A-QRS-TX
Q349	8-729-422-27	TRANSISTOR	2SD601A-Q
Q350	8-729-422-27	TRANSISTOR	2SD601A-Q
Q351	8-729-122-63	TRANSISTOR	2SA1226-E4
Q352	8-729-422-27	TRANSISTOR	2SD601A-Q
Q353	8-729-424-02	TRANSISTOR	2SB709A-QRS-TX
Q354	8-729-424-02	TRANSISTOR	2SB709A-QRS-TX
Q355	8-729-422-27	TRANSISTOR	2SD601A-Q
Q356	8-729-424-02	TRANSISTOR	2SB709A-QRS-TX
Q357	8-729-424-02	TRANSISTOR	2SB709A-QRS-TX
Q358	8-729-424-02	TRANSISTOR	2SB709A-QRS-TX

REF. NO.	PART NO.	DESCRIPTION	VALUES
Q361	8-729-422-27	TRANSISTOR	2SD601A-Q
Q363	8-729-422-27	TRANSISTOR	2SD601A-Q
Q367	8-729-122-63	TRANSISTOR	2SA1226-E4
Q368	8-729-422-27	TRANSISTOR	2SD601A-Q
Q369	1-801-806-11	TRANSISTOR	DTC144EKA
Q373	8-729-422-27	TRANSISTOR	2SD601A-Q
Q374	8-729-422-27	TRANSISTOR	2SD601A-Q
Q378	8-729-422-27	TRANSISTOR	2SD601A-Q
Q379	8-729-424-02	TRANSISTOR	2SB709A-QRS-TX
Q380	8-729-422-27	TRANSISTOR	2SD601A-Q
Q381	8-729-422-27	TRANSISTOR	2SD601A-Q
Q501	8-729-026-49	TRANSISTOR	2SA1037AK-T146-R
Q502	1-801-806-11	TRANSISTOR	DTC144EKA
Q701	8-729-422-27	TRANSISTOR	2SD601A-Q
Q702	8-729-424-02	TRANSISTOR	2SB709A-QRS-TX
Q703	8-729-422-27	TRANSISTOR	2SD601A-Q
Q704	8-729-424-02	TRANSISTOR	2SB709A-QRS-TX
Q705	8-729-422-27	TRANSISTOR	2SD601A-Q
Q706	8-729-424-02	TRANSISTOR	2SB709A-QRS-TX
Q707	1-801-806-11	TRANSISTOR	DTC144EKA
Q708	8-729-422-27	TRANSISTOR	2SD601A-Q
Q709	8-729-422-27	TRANSISTOR	2SD601A-Q
Q710	8-729-422-27	TRANSISTOR	2SD601A-Q
Q712	8-729-424-02	TRANSISTOR	2SB709A-QRS-TX
Q713	8-729-424-02	TRANSISTOR	2SB709A-QRS-TX
Q714	8-729-027-38	TRANSISTOR	DTA144EKA-T146
Q715	8-729-422-27	TRANSISTOR	2SD601A-Q
Q716	8-729-422-27	TRANSISTOR	2SD601A-Q
Q717	8-729-422-27	TRANSISTOR	2SD601A-Q
Q718	8-729-422-27	TRANSISTOR	2SD601A-Q
Q721	8-729-424-02	TRANSISTOR	2SB709A-QRS-TX
Q722	8-729-422-27	TRANSISTOR	2SD601A-Q
Q723	8-729-422-27	TRANSISTOR	2SD601A-Q
Q725	8-729-424-02	TRANSISTOR	2SB709A-QRS-TX

RESISTOR

R1	1-216-464-11	METAL OXIDE	18K	5%	2W
R2	1-216-813-11	METAL CHIP	220	5%	1/10W
R3	1-216-813-11	METAL CHIP	220	5%	1/10W
R4	1-216-813-11	METAL CHIP	220	5%	1/10W
R5	1-216-813-11	METAL CHIP	220	5%	1/10W
R6	1-216-813-11	METAL CHIP	220	5%	1/10W
R7	1-216-833-11	METAL CHIP	10K	5%	1/10W
R8	1-216-813-11	METAL CHIP	220	5%	1/10W

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REF. NO.	PART NO.	DESCRIPTION	VALUES		
R9	1-216-813-11	METAL CHIP	220	5%	1/10W
R10	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R11	1-218-720-11	METAL CHIP	15K	0.50%	1/10W
R12	1-218-722-11	METAL CHIP	18K	0.50%	1/10W
R13	1-218-740-11	METAL CHIP	100K	0.50%	1/10W
R14	1-216-839-11	METAL CHIP	33K	5%	1/10W
R15	1-216-821-11	METAL CHIP	1K	5%	1/10W
R16	1-218-702-11	METAL CHIP	2.7K	0.50%	1/10W
R17	1-218-706-11	METAL CHIP	3.9K	0.50%	1/10W
R18	1-218-714-11	METAL CHIP	8.2K	0.50%	1/10W
R19	1-216-817-11	METAL CHIP	470	5%	1/10W
R20	1-216-827-11	METAL CHIP	3.3K	5%	1/10W
R21	1-216-839-11	METAL CHIP	33K	5%	1/10W
R22	1-216-817-11	METAL CHIP	470	5%	1/10W
R23	1-216-809-11	METAL CHIP	100	5%	1/10W
R24	1-216-809-11	METAL CHIP	100	5%	1/10W
R25	1-216-809-11	METAL CHIP	100	5%	1/10W
R26	1-216-809-11	METAL CHIP	100	5%	1/10W
R27	1-218-707-11	METAL CHIP	4.3K	0.50%	1/10W
R29	1-216-864-11	SHORT CHIP			
R30	1-216-809-11	METAL CHIP	100	5%	1/10W
R31	1-216-809-11	METAL CHIP	100	5%	1/10W
R32	1-216-864-11	SHORT CHIP			
R33	1-216-809-11	METAL CHIP	100	5%	1/10W
R37	1-216-853-11	METAL CHIP	470K	5%	1/10W
R39	1-216-855-11	METAL CHIP	680K	5%	1/10W
R40	1-216-809-11	METAL CHIP	100	5%	1/10W
R42	1-216-855-11	METAL CHIP	680K	5%	1/10W
R43	1-216-853-11	METAL CHIP	470K	5%	1/10W
R44	1-249-377-11	CARBON	0.47	5%	1/4W
R46	1-216-822-11	METAL CHIP	1.2K	5%	1/10W
R48	1-216-809-11	METAL CHIP	100	5%	1/10W
R49	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R50	1-216-809-11	METAL CHIP	100	5%	1/10W
R51	1-216-833-11	METAL CHIP	10K	5%	1/10W
R52	1-216-833-11	METAL CHIP	10K	5%	1/10W
R53	1-216-817-11	METAL CHIP	470	5%	1/10W
R54	1-216-817-11	METAL CHIP	470	5%	1/10W
R55	1-216-822-11	METAL CHIP	1.2K	5%	1/10W
R56	1-216-805-11	METAL CHIP	47	5%	1/10W
R57	1-216-805-11	METAL CHIP	47	5%	1/10W
R59	1-216-821-11	METAL CHIP	1K	5%	1/10W

REF. NO.	PART NO.	DESCRIPTION	VALUES		
R60	1-216-833-11	METAL CHIP	10K	5%	1/10W
R61	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R62	1-216-821-11	METAL CHIP	1K	5%	1/10W
R63	1-216-809-11	METAL CHIP	100	5%	1/10W
R64	1-216-837-11	METAL CHIP	22K	5%	1/10W
R65	1-216-833-11	METAL CHIP	10K	5%	1/10W
R66	1-216-849-11	METAL CHIP	220K	5%	1/10W
R67	1-216-841-11	METAL CHIP	47K	5%	1/10W
R68	1-216-839-11	METAL CHIP	33K	5%	1/10W
R69	1-216-857-11	METAL CHIP	1M	5%	1/10W
R70	1-216-845-11	METAL CHIP	100K	5%	1/10W
R71	1-216-813-11	METAL CHIP	220	5%	1/10W
R72	1-216-821-11	METAL CHIP	1K	5%	1/10W
R73	1-218-686-11	METAL CHIP	560	0.50%	1/10W
R74	1-218-684-11	METAL CHIP	470	0.50%	1/10W
R75	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R76	1-216-818-11	METAL CHIP	560	5%	1/10W
R77	1-216-821-11	METAL CHIP	1K	5%	1/10W
R78	1-218-686-11	METAL CHIP	560	0.50%	1/10W
R79	1-216-818-11	METAL CHIP	560	5%	1/10W
R80	1-218-686-11	METAL CHIP	560	0.50%	1/10W
R81	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R82	1-216-821-11	METAL CHIP	1K	5%	1/10W
R85	1-216-830-11	METAL CHIP	5.6K	5%	1/10W
R87	1-216-833-11	METAL CHIP	10K	5%	1/10W
R88	1-216-830-11	METAL CHIP	5.6K	5%	1/10W
R89	1-216-813-11	METAL CHIP	220	5%	1/10W
R90	1-216-864-11	SHORT CHIP			
R91	1-216-864-11	SHORT CHIP			
R92	1-216-830-11	METAL CHIP	5.6K	5%	1/10W
R93	1-216-830-11	METAL CHIP	5.6K	5%	1/10W
R95	1-216-818-11	METAL CHIP	560	5%	1/10W
R96	1-216-818-11	METAL CHIP	560	5%	1/10W
R99	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R100	1-216-833-11	METAL CHIP	10K	5%	1/10W
R102	1-216-818-11	METAL CHIP	560	5%	1/10W
R103	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R104	1-216-821-11	METAL CHIP	1K	5%	1/10W
R105	1-216-821-11	METAL CHIP	1K	5%	1/10W
R107	1-216-833-11	METAL CHIP	10K	5%	1/10W
R108	1-216-818-11	METAL CHIP	560	5%	1/10W
R109	1-216-807-11	METAL CHIP	68	5%	1/10W
R110	1-216-809-11	METAL CHIP	100	5%	1/10W

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REF. NO.	PART NO.	DESCRIPTION	VALUES		
R111	1-216-809-11	METAL CHIP	100	5%	1/10W
R112	1-216-857-11	METAL CHIP	1M	5%	1/10W
R113	1-216-845-11	METAL CHIP	100K	5%	1/10W
R114	1-216-809-11	METAL CHIP	100	5%	1/10W
R115	1-216-820-11	METAL CHIP	820	5%	1/10W
R116	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R117	1-216-821-11	METAL CHIP	1K	5%	1/10W
R118	1-216-820-11	METAL CHIP	820	5%	1/10W
R119	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R120	1-216-834-11	METAL CHIP	12K	5%	1/10W
R121	1-216-839-11	METAL CHIP	33K	5%	1/10W
R122	1-216-820-11	METAL CHIP	820	5%	1/10W
R123	1-216-833-11	METAL CHIP	10K	5%	1/10W
R124	1-216-834-11	METAL CHIP	12K	5%	1/10W
R125	1-216-839-11	METAL CHIP	33K	5%	1/10W
R126	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R127	1-216-839-11	METAL CHIP	33K	5%	1/10W
R128	1-216-821-11	METAL CHIP	1K	5%	1/10W
R129	1-216-805-11	METAL CHIP	47	5%	1/10W
R130	1-216-821-11	METAL CHIP	1K	5%	1/10W
R131	1-216-837-11	METAL CHIP	22K	5%	1/10W
R133	1-218-686-11	METAL CHIP	560	0.50%	1/10W
R134	1-218-683-11	METAL CHIP	430	0.50%	1/10W
R135	1-216-809-11	METAL CHIP	100	5%	1/10W
R136	1-216-821-11	METAL CHIP	1K	5%	1/10W
R137	1-216-833-11	METAL CHIP	10K	5%	1/10W
R138	1-216-833-11	METAL CHIP	10K	5%	1/10W
R139	1-216-841-11	METAL CHIP	47K	5%	1/10W
R140	1-216-833-11	METAL CHIP	10K	5%	1/10W
R141	1-216-809-11	METAL CHIP	100	5%	1/10W
R142	1-216-839-11	METAL CHIP	33K	5%	1/10W
R143	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R144	1-216-840-11	METAL CHIP	39K	5%	1/10W
R145	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R146	1-216-839-11	METAL CHIP	33K	5%	1/10W
R147	1-216-833-11	METAL CHIP	10K	5%	1/10W
R148	1-216-397-11	METAL OXIDE	4.7	5%	3W
R151	1-216-833-11	METAL CHIP	10K	5%	1/10W
R152	1-216-833-11	METAL CHIP	10K	5%	1/10W
R153	1-216-833-11	METAL CHIP	10K	5%	1/10W
R154	1-216-830-11	METAL CHIP	5.6K	5%	1/10W
R155	1-216-864-11	SHORT CHIP			

REF. NO.	PART NO.	DESCRIPTION	VALUES		
R301	1-216-809-11	METAL CHIP	100	5%	1/10W
R302	1-216-809-11	METAL CHIP	100	5%	1/10W
R303	1-216-833-11	METAL CHIP	10K	5%	1/10W
R304	1-216-833-11	METAL CHIP	10K	5%	1/10W
R305	1-216-835-11	METAL CHIP	15K	5%	1/10W
R306	1-218-696-11	METAL CHIP	1.5K	0.50%	1/10W
R307	1-218-696-11	METAL CHIP	1.5K	0.50%	1/10W
R308	1-216-821-11	METAL CHIP	1K	5%	1/10W
R309	1-216-813-11	METAL CHIP	220	5%	1/10W
R310	1-216-857-11	METAL CHIP	1M	5%	1/10W
R311	1-216-840-11	METAL CHIP	39K	5%	1/10W
R312	1-216-809-11	METAL CHIP	100	5%	1/10W
R313	1-216-833-11	METAL CHIP	10K	5%	1/10W
R314	1-216-833-11	METAL CHIP	10K	5%	1/10W
R315	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R316	1-216-821-11	METAL CHIP	1K	5%	1/10W
R317	1-216-821-11	METAL CHIP	1K	5%	1/10W
R318	1-216-833-11	METAL CHIP	10K	5%	1/10W
R319	1-216-864-11	SHORT CHIP			
R320	1-216-833-11	METAL CHIP	10K	5%	1/10W
R321	1-216-821-11	METAL CHIP	1K	5%	1/10W
R322	1-216-809-11	METAL CHIP	100	5%	1/10W
R323	1-216-809-11	METAL CHIP	100	5%	1/10W
R324	1-216-809-11	METAL CHIP	100	5%	1/10W
R325	1-216-835-11	METAL CHIP	15K	5%	1/10W
R326	1-216-864-11	SHORT CHIP			
R327	1-216-817-11	METAL CHIP	470	5%	1/10W
R329	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R330	1-216-828-11	METAL CHIP	3.9K	5%	1/10W
R331	1-216-833-11	METAL CHIP	10K	5%	1/10W
R332	1-218-700-11	METAL CHIP	2.2K	0.50%	1/10W
R333	1-216-809-11	METAL CHIP	100	5%	1/10W
R334	1-216-809-11	METAL CHIP	100	5%	1/10W
R335	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R336	1-216-809-11	METAL CHIP	100	5%	1/10W
R337	1-216-823-11	METAL CHIP	1.5K	5%	1/10W
R338	1-216-823-11	METAL CHIP	1.5K	5%	1/10W
R339	1-216-809-11	METAL CHIP	100	5%	1/10W
R340	1-216-828-11	METAL CHIP	3.9K	5%	1/10W
R341	1-218-706-11	METAL CHIP	3.9K	0.50%	1/10W
R342	1-216-841-11	METAL CHIP	47K	5%	1/10W
R343	1-216-809-11	METAL CHIP	100	5%	1/10W
R344	1-216-809-11	METAL CHIP	100	5%	1/10W

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REF. NO.	PART NO.	DESCRIPTION	VALUES		
R345	1-218-696-11	METAL CHIP	1.5K	0.50%	1/10W
R346	1-218-696-11	METAL CHIP	1.5K	0.50%	1/10W
R347	1-216-817-11	METAL CHIP	470	5%	1/10W
R348	1-216-841-11	METAL CHIP	47K	5%	1/10W
R349	1-216-813-11	METAL CHIP	220	5%	1/10W
R350	1-216-809-11	METAL CHIP	100	5%	1/10W
R351	1-216-813-11	METAL CHIP	220	5%	1/10W
R352	1-216-813-11	METAL CHIP	220	5%	1/10W
R353	1-216-809-11	METAL CHIP	100	5%	1/10W
R354	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R355	1-216-809-11	METAL CHIP	100	5%	1/10W
R356	1-216-841-11	METAL CHIP	47K	5%	1/10W
R357	1-216-837-11	METAL CHIP	22K	5%	1/10W
R358	1-216-837-11	METAL CHIP	22K	5%	1/10W
R359	1-216-837-11	METAL CHIP	22K	5%	1/10W
R360	1-216-837-11	METAL CHIP	22K	5%	1/10W
R361	1-216-837-11	METAL CHIP	22K	5%	1/10W
R362	1-216-837-11	METAL CHIP	22K	5%	1/10W
R363	1-216-809-11	METAL CHIP	100	5%	1/10W
R364	1-216-809-11	METAL CHIP	100	5%	1/10W
R365	1-216-809-11	METAL CHIP	100	5%	1/10W
R366	1-216-841-11	METAL CHIP	47K	5%	1/10W
R367	1-216-821-11	METAL CHIP	1K	5%	1/10W
R368	1-216-821-11	METAL CHIP	1K	5%	1/10W
R369	1-216-821-11	METAL CHIP	1K	5%	1/10W
R370	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R371	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R372	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R373	1-216-809-11	METAL CHIP	100	5%	1/10W
R374	1-216-815-11	METAL CHIP	330	5%	1/10W
R375	1-216-815-11	METAL CHIP	330	5%	1/10W
R376	1-216-815-11	METAL CHIP	330	5%	1/10W
R377	1-216-837-11	METAL CHIP	22K	5%	1/10W
R378	1-216-837-11	METAL CHIP	22K	5%	1/10W
R379	1-216-837-11	METAL CHIP	22K	5%	1/10W
R380	1-216-837-11	METAL CHIP	22K	5%	1/10W
R381	1-216-837-11	METAL CHIP	22K	5%	1/10W
R382	1-216-837-11	METAL CHIP	22K	5%	1/10W
R383	1-216-809-11	METAL CHIP	100	5%	1/10W
R384	1-216-809-11	METAL CHIP	100	5%	1/10W
R385	1-216-821-11	METAL CHIP	1K	5%	1/10W
R386	1-216-809-11	METAL CHIP	100	5%	1/10W

REF. NO.	PART NO.	DESCRIPTION	VALUES		
R387	1-216-845-11	METAL CHIP	100K	5%	1/10W
R388	1-216-837-11	METAL CHIP	22K	5%	1/10W
R389	1-216-809-11	METAL CHIP	100	5%	1/10W
R390	1-216-809-11	METAL CHIP	100	5%	1/10W
R391	1-216-809-11	METAL CHIP	100	5%	1/10W
R392	1-216-809-11	METAL CHIP	100	5%	1/10W
R393	1-216-809-11	METAL CHIP	100	5%	1/10W
R394	1-216-809-11	METAL CHIP	100	5%	1/10W
R395	1-216-821-11	METAL CHIP	1K	5%	1/10W
R396	1-216-821-11	METAL CHIP	1K	5%	1/10W
R397	1-216-821-11	METAL CHIP	1K	5%	1/10W
R398	1-216-845-11	METAL CHIP	100K	5%	1/10W
R399	1-216-833-11	METAL CHIP	10K	5%	1/10W
R400	1-216-845-11	METAL CHIP	100K	5%	1/10W
R401	1-216-845-11	METAL CHIP	100K	5%	1/10W
R402	1-216-845-11	METAL CHIP	100K	5%	1/10W
R403	1-216-845-11	METAL CHIP	100K	5%	1/10W
R404	1-216-845-11	METAL CHIP	100K	5%	1/10W
R405	1-216-845-11	METAL CHIP	100K	5%	1/10W
R406	1-216-864-11	SHORT CHIP			
R407	1-216-833-11	METAL CHIP	10K	5%	1/10W
R408	1-216-821-11	METAL CHIP	1K	5%	1/10W
R409	1-216-821-11	METAL CHIP	1K	5%	1/10W
R410	1-218-673-11	METAL CHIP	160	0.50%	1/10W
R411	1-218-673-11	METAL CHIP	160	0.50%	1/10W
R412	1-216-813-11	METAL CHIP	220	5%	1/10W
R413	1-218-668-11	METAL CHIP	100	0.50%	1/10W
R414	1-218-668-11	METAL CHIP	100	0.50%	1/10W
R415	1-218-668-11	METAL CHIP	100	0.50%	1/10W
R416	1-216-857-11	METAL CHIP	1M	5%	1/10W
R417	1-216-809-11	METAL CHIP	100	5%	1/10W
R418	1-216-809-11	METAL CHIP	100	5%	1/10W
R419	1-218-702-11	METAL CHIP	2.7K	0.50%	1/10W
R420	1-218-698-11	METAL CHIP	1.8K	0.50%	1/10W
R421	1-216-809-11	METAL CHIP	100	5%	1/10W
R422	1-216-809-11	METAL CHIP	100	5%	1/10W
R423	1-216-809-11	METAL CHIP	100	5%	1/10W
R424	1-218-674-11	METAL CHIP	180	0.50%	1/10W
R425	1-218-674-11	METAL CHIP	180	0.50%	1/10W
R426	1-218-674-11	METAL CHIP	180	0.50%	1/10W
R427	1-218-673-11	METAL CHIP	160	0.50%	1/10W
R428	1-216-864-11	SHORT CHIP			
R429	1-216-850-11	METAL CHIP	270K	5%	1/10W

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REF. NO.	PART NO.	DESCRIPTION	VALUES		
R431	1-216-809-11	METAL CHIP	100	5%	1/10W
R432	1-216-817-11	METAL CHIP	470	5%	1/10W
R433	1-216-817-11	METAL CHIP	470	5%	1/10W
R434	1-216-809-11	METAL CHIP	100	5%	1/10W
R435	1-216-817-11	METAL CHIP	470	5%	1/10W
R436	1-216-809-11	METAL CHIP	100	5%	1/10W
R437	1-216-809-11	METAL CHIP	100	5%	1/10W
R438	1-216-809-11	METAL CHIP	100	5%	1/10W
R439	1-216-817-11	METAL CHIP	470	5%	1/10W
R440	1-216-813-11	METAL CHIP	220	5%	1/10W
R441	1-216-813-11	METAL CHIP	220	5%	1/10W
R442	1-216-813-11	METAL CHIP	220	5%	1/10W
R443	1-216-809-11	METAL CHIP	100	5%	1/10W
R444	1-216-809-11	METAL CHIP	100	5%	1/10W
R445	1-216-809-11	METAL CHIP	100	5%	1/10W
R446	1-216-809-11	METAL CHIP	100	5%	1/10W
R447	1-216-809-11	METAL CHIP	100	5%	1/10W
R448	1-216-809-11	METAL CHIP	100	5%	1/10W
R449	1-216-809-11	METAL CHIP	100	5%	1/10W
R450	1-216-814-11	METAL CHIP	270	5%	1/10W
R451	1-216-814-11	METAL CHIP	270	5%	1/10W
R452	1-216-814-11	METAL CHIP	270	5%	1/10W
R453	1-216-841-11	METAL CHIP	47K	5%	1/10W
R454	1-216-837-11	METAL CHIP	22K	5%	1/10W
R455	1-216-837-11	METAL CHIP	22K	5%	1/10W
R456	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R457	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R458	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R459	1-216-815-11	METAL CHIP	330	5%	1/10W
R460	1-216-815-11	METAL CHIP	330	5%	1/10W
R461	1-216-815-11	METAL CHIP	330	5%	1/10W
R462	1-216-817-11	METAL CHIP	470	5%	1/10W
R463	1-218-716-11	METAL CHIP	10K	0.50%	1/10W
R464	1-216-809-11	METAL CHIP	100	5%	1/10W
R468	1-216-809-11	METAL CHIP	100	5%	1/10W
R469	1-216-797-11	METAL CHIP	10	5%	1/10W
R470	1-216-839-11	METAL CHIP	33K	5%	1/10W
R472	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R473	1-216-809-11	METAL CHIP	100	5%	1/10W
R476	1-216-808-11	METAL CHIP	82	5%	1/10W
R477	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R480	1-216-829-11	METAL CHIP	4.7K	5%	1/10W

REF. NO.	PART NO.	DESCRIPTION	VALUES		
R481	1-216-821-11	METAL CHIP	1K	5%	1/10W
R482	1-216-839-11	METAL CHIP	33K	5%	1/10W
R483	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R484	1-216-809-11	METAL CHIP	100	5%	1/10W
R486	1-216-809-11	METAL CHIP	100	5%	1/10W
R487	1-216-809-11	METAL CHIP	100	5%	1/10W
R489	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R490	1-216-808-11	METAL CHIP	82	5%	1/10W
R491	1-216-833-11	METAL CHIP	10K	5%	1/10W
R492	1-216-864-11	SHORT CHIP			
R493	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R494	1-216-833-11	METAL CHIP	10K	5%	1/10W
R495	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R496	1-216-809-11	METAL CHIP	100	5%	1/10W
R501	1-216-808-11	METAL CHIP	82	5%	1/10W
R502	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R503	1-216-833-11	METAL CHIP	10K	5%	1/10W
R504	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R505	1-216-821-11	METAL CHIP	1K	5%	1/10W
R506	1-216-837-11	METAL CHIP	22K	5%	1/10W
R507	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R508	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R509	1-216-837-11	METAL CHIP	22K	5%	1/10W
R510	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R512	1-216-864-11	SHORT CHIP			
R513	1-216-826-11	METAL CHIP	2.7K	5%	1/10W
R515	1-216-809-11	METAL CHIP	100	5%	1/10W
R516	1-216-809-11	METAL CHIP	100	5%	1/10W
R517	1-216-809-11	METAL CHIP	100	5%	1/10W
R518	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R519	1-216-821-11	METAL CHIP	1K	5%	1/10W
R521	1-216-833-11	METAL CHIP	10K	5%	1/10W
R527	1-216-864-11	SHORT CHIP			
R538	1-216-809-11	METAL CHIP	100	5%	1/10W
R540	1-216-809-11	METAL CHIP	100	5%	1/10W
R541	1-218-867-11	METAL CHIP	6.8K	0.50%	1/10W
R542	1-216-809-11	METAL CHIP	100	5%	1/10W
R543	1-216-826-11	METAL CHIP	2.7K	5%	1/10W
R544	1-216-827-11	METAL CHIP	3.3K	5%	1/10W
R550	1-216-863-11	METAL CHIP	3.3M	5%	1/10W
R551	1-216-833-11	METAL CHIP	10K	5%	1/10W
R552	1-216-809-11	METAL CHIP	100	5%	1/10W
R553	1-216-834-11	METAL CHIP	12K	5%	1/10W

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REF. NO.	PART NO.	DESCRIPTION	VALUES		
R554	1-216-809-11	METAL CHIP	100	5%	1/10W
R556	1-216-808-11	METAL CHIP	82	5%	1/10W
R557	1-216-808-11	METAL CHIP	82	5%	1/10W
R558	1-216-808-11	METAL CHIP	82	5%	1/10W
R559	1-216-817-11	METAL CHIP	470	5%	1/10W
R561	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R562	1-216-817-11	METAL CHIP	470	5%	1/10W
R566	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R567	1-218-708-11	METAL CHIP	4.7K	0.50%	1/10W
R568	1-216-809-11	METAL CHIP	100	5%	1/10W
R569	1-216-809-11	METAL CHIP	100	5%	1/10W
R570	1-218-716-11	METAL CHIP	10K	0.50%	1/10W
R571	1-216-864-11	SHORT CHIP			
R572	1-216-835-11	METAL CHIP	15K	5%	1/10W
R574	1-216-833-11	METAL CHIP	10K	5%	1/10W
R575	1-216-833-11	METAL CHIP	10K	5%	1/10W
R576	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R577	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R593	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R594	1-216-833-11	METAL CHIP	10K	5%	1/10W
R596	1-216-841-11	METAL CHIP	47K	5%	1/10W
R597	1-216-821-11	METAL CHIP	1K	5%	1/10W
R598	1-216-833-11	METAL CHIP	10K	5%	1/10W
R599	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R602	1-216-837-11	METAL CHIP	22K	5%	1/10W
R603	1-216-833-11	METAL CHIP	10K	5%	1/10W
R604	1-216-833-11	METAL CHIP	10K	5%	1/10W
R605	1-216-833-11	METAL CHIP	10K	5%	1/10W
R606	1-216-833-11	METAL CHIP	10K	5%	1/10W
R607	1-216-833-11	METAL CHIP	10K	5%	1/10W
R608	1-216-833-11	METAL CHIP	10K	5%	1/10W
R609	1-216-809-11	METAL CHIP	100	5%	1/10W
R613	1-216-833-11	METAL CHIP	10K	5%	1/10W
R616	1-216-833-11	METAL CHIP	10K	5%	1/10W
R617	1-216-809-11	METAL CHIP	100	5%	1/10W
R618	1-216-809-11	METAL CHIP	100	5%	1/10W
R619	1-216-821-11	METAL CHIP	1K	5%	1/10W
R620	1-216-801-11	METAL CHIP	22	5%	1/10W
R621	1-216-801-11	METAL CHIP	22	5%	1/10W
R622	1-216-801-11	METAL CHIP	22	5%	1/10W
R624	1-216-809-11	METAL CHIP	100	5%	1/10W
R628	1-249-377-11	CARBON	0.47	5%	1/4W

REF. NO.	PART NO.	DESCRIPTION	VALUES		
R701	1-216-817-11	METAL CHIP	470	5%	1/10W
R702	1-216-841-11	METAL CHIP	47K	5%	1/10W
R703	1-216-821-11	METAL CHIP	1K	5%	1/10W
R705	1-216-809-11	METAL CHIP	100	5%	1/10W
R706	1-216-809-11	METAL CHIP	100	5%	1/10W
R707	1-216-809-11	METAL CHIP	100	5%	1/10W
R708	1-216-809-11	METAL CHIP	100	5%	1/10W
R709	1-216-817-11	METAL CHIP	470	5%	1/10W
R710	1-216-813-11	METAL CHIP	220	5%	1/10W
R711	1-216-833-11	METAL CHIP	10K	5%	1/10W
R712	1-216-813-11	METAL CHIP	220	5%	1/10W
R713	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R714	1-216-809-11	METAL CHIP	100	5%	1/10W
R715	1-216-809-11	METAL CHIP	100	5%	1/10W
R716	1-216-821-11	METAL CHIP	1K	5%	1/10W
R717	1-216-827-11	METAL CHIP	3.3K	5%	1/10W
R718	1-216-827-11	METAL CHIP	3.3K	5%	1/10W
R719	1-216-813-11	METAL CHIP	220	5%	1/10W
R720	1-216-809-11	METAL CHIP	100	5%	1/10W
R721	1-216-823-11	METAL CHIP	1.5K	5%	1/10W
R722	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R723	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R724	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R725	1-216-809-11	METAL CHIP	100	5%	1/10W
R727	1-216-809-11	METAL CHIP	100	5%	1/10W
R728	1-216-864-11	SHORT CHIP			
R730	1-216-809-11	METAL CHIP	100	5%	1/10W
R732	1-216-809-11	METAL CHIP	100	5%	1/10W
R733	1-216-821-11	METAL CHIP	1K	5%	1/10W
R735	1-216-833-11	METAL CHIP	10K	5%	1/10W
R736	1-216-813-11	METAL CHIP	220	5%	1/10W
R737	1-216-833-11	METAL CHIP	10K	5%	1/10W
R738	1-218-708-11	METAL CHIP	4.7K	0.50%	1/10W
R740	1-216-809-11	METAL CHIP	100	5%	1/10W
R742	1-216-821-11	METAL CHIP	1K	5%	1/10W
R743	1-216-809-11	METAL CHIP	100	5%	1/10W
R744	1-216-821-11	METAL CHIP	1K	5%	1/10W
R745	1-216-841-11	METAL CHIP	47K	5%	1/10W
R747	1-216-809-11	METAL CHIP	100	5%	1/10W
R748	1-216-833-11	METAL CHIP	10K	5%	1/10W
R749	1-216-849-11	METAL CHIP	220K	5%	1/10W
R750	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R751	1-216-821-11	METAL CHIP	1K	5%	1/10W

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REF. NO.	PART NO.	DESCRIPTION	VALUES		
R752	1-216-821-11	METAL CHIP	1K	5%	1/10W
R753	1-216-809-11	METAL CHIP	100	5%	1/10W
R754	1-216-809-11	METAL CHIP	100	5%	1/10W
R755	1-216-809-11	METAL CHIP	100	5%	1/10W
R756	1-216-809-11	METAL CHIP	100	5%	1/10W
R758	1-216-809-11	METAL CHIP	100	5%	1/10W
R759	1-216-821-11	METAL CHIP	1K	5%	1/10W
R760	1-216-849-11	METAL CHIP	220K	5%	1/10W
R761	1-216-849-11	METAL CHIP	220K	5%	1/10W
R762	1-216-845-11	METAL CHIP	100K	5%	1/10W
R763	1-216-815-11	METAL CHIP	330	5%	1/10W
R764	1-216-821-11	METAL CHIP	1K	5%	1/10W
R765	1-216-815-11	METAL CHIP	330	5%	1/10W
R766	1-216-821-11	METAL CHIP	1K	5%	1/10W
R767	1-216-833-11	METAL CHIP	10K	5%	1/10W
R768	1-216-809-11	METAL CHIP	100	5%	1/10W
R769	1-216-809-11	METAL CHIP	100	5%	1/10W
R770	1-216-845-11	METAL CHIP	100K	5%	1/10W
R771	1-216-809-11	METAL CHIP	100	5%	1/10W
R772	1-216-821-11	METAL CHIP	1K	5%	1/10W
R773	1-216-809-11	METAL CHIP	100	5%	1/10W
R774	1-216-809-11	METAL CHIP	100	5%	1/10W
R775	1-216-821-11	METAL CHIP	1K	5%	1/10W
R777	1-216-821-11	METAL CHIP	1K	5%	1/10W
R778	1-216-809-11	METAL CHIP	100	5%	1/10W
R779	1-216-809-11	METAL CHIP	100	5%	1/10W
R781	1-216-823-11	METAL CHIP	1.5K	5%	1/10W
R782	1-216-809-11	METAL CHIP	100	5%	1/10W
R783	1-216-809-11	METAL CHIP	100	5%	1/10W
R784	1-216-809-11	METAL CHIP	100	5%	1/10W
R785	1-216-821-11	METAL CHIP	1K	5%	1/10W
R786	1-216-821-11	METAL CHIP	1K	5%	1/10W
R787	1-216-833-11	METAL CHIP	10K	5%	1/10W
R788	1-216-845-11	METAL CHIP	100K	5%	1/10W
R790	1-216-837-11	METAL CHIP	22K	5%	1/10W
R796	1-216-821-11	METAL CHIP	1K	5%	1/10W
R797	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R803	1-216-833-11	METAL CHIP	10K	5%	1/10W
R804	1-216-837-11	METAL CHIP	22K	5%	1/10W
R806	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R807	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R810	1-216-833-11	METAL CHIP	10K	5%	1/10W

REF. NO.	PART NO.	DESCRIPTION	VALUES		
R813	1-216-845-11	METAL CHIP	100K	5%	1/10W
R817	1-216-845-11	METAL CHIP	100K	5%	1/10W
R818	1-216-833-11	METAL CHIP	10K	5%	1/10W
R823	1-216-835-11	METAL CHIP	15K	5%	1/10W
R828	1-216-817-11	METAL CHIP	470	5%	1/10W
R829	1-216-864-11	SHORT CHIP			
R830	1-216-849-11	METAL CHIP	220K	5%	1/10W
R831	1-216-839-11	METAL CHIP	33K	5%	1/10W
R832	1-216-817-11	METAL CHIP	470	5%	1/10W
R833	1-216-839-11	METAL CHIP	33K	5%	1/10W
R834	1-216-805-11	METAL CHIP	47	5%	1/10W
R835	1-216-837-11	METAL CHIP	22K	5%	1/10W
R836	1-216-864-11	SHORT CHIP			
R840	1-216-841-11	METAL CHIP	47K	5%	1/10W
R841	1-216-839-11	METAL CHIP	33K	5%	1/10W
R842	1-216-817-11	METAL CHIP	470	5%	1/10W
R843	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R844	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R845	1-216-817-11	METAL CHIP	470	5%	1/10W
R848	1-216-836-11	METAL CHIP	18K	5%	1/10W
R849	1-216-836-11	METAL CHIP	18K	5%	1/10W
R851	1-216-833-11	METAL CHIP	10K	5%	1/10W
R854	1-216-838-11	METAL CHIP	27K	5%	1/10W
R855	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R857	1-216-838-11	METAL CHIP	27K	5%	1/10W
R858	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R860	1-249-389-11	CARBON	4.7	5%	1/4W
R861	1-249-389-11	CARBON	4.7	5%	1/4W
R862	1-216-839-11	METAL CHIP	33K	5%	1/10W
R863	1-216-841-11	METAL CHIP	47K	5%	1/10W
R864	1-216-839-11	METAL CHIP	33K	5%	1/10W
R867	1-216-837-11	METAL CHIP	22K	5%	1/10W
R868	1-216-837-11	METAL CHIP	22K	5%	1/10W
R869	1-216-834-11	METAL CHIP	12K	5%	1/10W
R870	1-216-841-11	METAL CHIP	47K	5%	1/10W
R871	1-216-809-11	METAL CHIP	100	5%	1/10W
R878	1-216-821-11	METAL CHIP	1K	5%	1/10W
R879	1-216-821-11	METAL CHIP	1K	5%	1/10W
R885	1-216-833-11	METAL CHIP	10K	5%	1/10W
R886	1-216-833-11	METAL CHIP	10K	5%	1/10W
R887	1-216-821-11	METAL CHIP	1K	5%	1/10W
R889	1-216-807-11	METAL CHIP	68	5%	1/10W
R890	1-216-807-11	METAL CHIP	68	5%	1/10W
R891	1-216-807-11	METAL CHIP	68	5%	1/10W

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REF. NO.	PART NO.	DESCRIPTION	VALUES		
R892	1-216-837-11	METAL CHIP	22K	5%	1/10W
R893	1-216-857-11	METAL CHIP	1M	5%	1/10W
R895	1-216-830-11	METAL CHIP	5.6K	5%	1/10W
R896	1-216-864-11	SHORT CHIP			
R897	1-216-821-11	METAL CHIP	1K	5%	1/10W
R898	1-216-805-11	METAL CHIP	47	5%	1/10W
R899	1-216-821-11	METAL CHIP	1K	5%	1/10W
	RESISTOR BRIDGE				
RB1	1-233-576-11	RES, CHIP NETWORK	100		
RB2	1-233-576-11	RES, CHIP NETWORK	100		
RB3	1-233-576-11	RES, CHIP NETWORK	100		
RB4	1-233-576-11	RES, CHIP NETWORK	100		
RB5	1-233-576-11	RES, CHIP NETWORK	100		
RB6	1-233-576-11	RES, CHIP NETWORK	100		
	TUNER				
TU1	8-598-594-10	TUNER, FSS BTF-FA421			
TU2	8-598-593-20	TUNER, FSS BTF-WA421			
	VARISTOR				
VD1	1-804-499-21	VARISTOR, CHIP	(1608)		
VD2	1-804-499-21	VARISTOR, CHIP	(1608)		
VD3	1-804-499-21	VARISTOR, CHIP	(1608)		
VD4	1-804-499-21	VARISTOR, CHIP	(1608)		
	CRYSTAL				
X1	1-577-110-11	VIBRATOR, CRYSTAL			
X301	1-567-505-11	OSCILLATOR, CRYSTAL			
X302	1-767-179-31	VIBRATOR, CERAMIC			
X303	1-567-505-11	OSCILLATOR, CRYSTAL			
X304	1-767-179-31	VIBRATOR, CERAMIC			
X305	1-781-282-11	VIBRATOR, CERAMIC			
X306	1-767-989-11	VIBRATOR, CERAMIC			
X307	1-760-895-21	VIBRATOR, CERAMIC			
X701	1-795-572-11	VIBRATOR, CRYSTAL			

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A-1300-551-A U BOARD, MOUNTED

CAPACITOR

REF. NO.	PART NO.	DESCRIPTION	VALUES		
C2001	1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
C2002	1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
C2003	1-126-935-11	ELECT	470µF	20%	16V
C2004	1-128-551-11	ELECT	22µF	20%	63V
C2005	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C2006	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C2007	1-126-964-11	ELECT	10µF	20%	50V
C2008	1-126-964-11	ELECT	10µF	20%	50V
C2012	1-126-964-11	ELECT	10µF	20%	50V
C2013	1-126-964-11	ELECT	10µF	20%	50V
C2014	1-126-960-11	ELECT	1µF	20%	50V
C2015	1-126-960-11	ELECT	1µF	20%	50V
C2016	1-126-964-11	ELECT	10µF	20%	50V
C2017	1-126-964-11	ELECT	10µF	20%	50V
C2018	1-126-960-11	ELECT	1µF	20%	50V
C2019	1-126-964-11	ELECT	10µF	20%	50V
C2020	1-126-964-11	ELECT	10µF	20%	50V
C2021	1-126-960-11	ELECT	1µF	20%	50V
C2022	1-126-960-11	ELECT	1µF	20%	50V
C2023	1-126-964-11	ELECT	10µF	20%	50V
C2024	1-126-964-11	ELECT	10µF	20%	50V
C2025	1-126-960-11	ELECT	1µF	20%	50V
C2026	1-126-960-11	ELECT	1µF	20%	50V
C2027	1-128-551-11	ELECT	22µF	20%	63V
C2028	1-126-933-11	ELECT	100µF	20%	16V
C2029	1-126-964-11	ELECT	10µF	20%	50V
C2030	1-126-964-11	ELECT	10µF	20%	50V
C2031	1-126-964-11	ELECT	10µF	20%	50V
C2032	1-126-964-11	ELECT	10µF	20%	50V
C2033	1-126-960-11	ELECT	1µF	20%	50V
C2036	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C2037	1-165-176-11	CERAMIC CHIP	0.047µF	10%	16V
C2038	1-164-816-11	CERAMIC CHIP	220pF	2.00%	50V
C2040	1-126-933-11	ELECT	100µF	20%	16V
C2043	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C2044	1-126-933-11	ELECT	100µF	20%	16V
C2045	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V

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REF. NO.	PART NO.	DESCRIPTION	VALUES		
C2046	1-125-891-11	CERAMIC CHIP	0.47µF	10%	10V
C2048	1-125-891-11	CERAMIC CHIP	0.47µF	10%	10V
C2050	1-125-891-11	CERAMIC CHIP	0.47µF	10%	10V
C2052	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C2055	1-126-964-11	ELECT	10µF	20%	50V
C2056	1-125-891-11	CERAMIC CHIP	0.47µF	10%	10V
C2060	1-126-933-11	ELECT	100µF	20%	16V
C2061	1-126-964-11	ELECT	10µF	20%	50V
C2062	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C2064	1-126-964-11	ELECT	10µF	20%	50V
C2069	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C2070	1-126-964-11	ELECT	10µF	20%	50V
C2071	1-126-933-11	ELECT	100µF	20%	16V
C2072	1-126-933-11	ELECT	100µF	20%	16V
C2075	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C2076	1-126-933-11	ELECT	100µF	20%	16V
C2077	1-126-933-11	ELECT	100µF	20%	16V
C2078	1-126-933-11	ELECT	100µF	20%	16V
C2079	1-126-933-11	ELECT	100µF	20%	16V
C2080	1-126-933-11	ELECT	100µF	20%	16V
C2081	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C2083	1-128-551-11	ELECT	22µF	20%	63V
C2084	1-126-964-11	ELECT	10µF	20%	50V
C2085	1-162-917-11	CERAMIC CHIP	15pF	5%	50V
C2087	1-164-160-11	CERAMIC CHIP	20pF	5%	50V
C2089	1-126-964-11	ELECT	10µF	20%	50V
C2090	1-164-227-11	CERAMIC CHIP	0.022µF	10%	25V
C2091	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C2092	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C2094	1-162-964-11	CERAMIC CHIP	0.001µF	10%	50V
C2096	1-162-917-11	CERAMIC CHIP	15pF	5%	50V
C2097	1-162-917-11	CERAMIC CHIP	15pF	5%	50V
C2098	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C2099	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C2102	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C2103	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C2111	1-126-964-11	ELECT	10µF	20%	50V
C2112	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C2113	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C2114	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C2122	1-126-964-11	ELECT	10µF	20%	50V
C2128	1-126-964-11	ELECT	10µF	20%	50V
C2348	1-126-947-11	ELECT	47µF	20%	35V

REF. NO.	PART NO.	DESCRIPTION	VALUES		
C2349	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C2350	1-126-964-11	ELECT	10µF	20%	50V
C2351	1-126-964-11	ELECT	10µF	20%	50V
C2352	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C2353	1-162-927-11	CERAMIC CHIP	100pF	5%	50V
C2354	1-136-287-11	FILM	0.0047µF	5%	100V
C2355	1-137-150-11	FILM	0.01µF	5%	100V
C2356	1-162-927-11	CERAMIC CHIP	100pF	5%	50V
C2357	1-126-933-11	ELECT	100µF	20%	16V
C2358	1-126-933-11	ELECT	100µF	20%	16V
C2359	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C2360	1-136-287-11	FILM	0.0047µF	5%	100V
C2365	1-136-169-00	FILM	0.22µF	5%	50V
C2366	1-137-150-11	FILM	0.01µF	5%	100V
C2367	1-136-287-11	FILM	0.0047µF	5%	100V
C2368	1-136-169-00	FILM	0.22µF	5%	50V

CONNECTOR

* CN2001	1-793-923-11	CONNECTOR, DIN (PLUG)	64P	
* CN2002	1-564-526-11	PLUG, CONNECTOR	11P	

DIODE

D2001	8-719-110-17	DIODE	RD10ESB2
D2002	8-719-110-17	DIODE	RD10ESB2
D2003	8-719-110-17	DIODE	RD10ESB2
D2004	8-719-110-17	DIODE	RD10ESB2
D2005	8-719-110-17	DIODE	RD10ESB2
D2006	8-719-110-17	DIODE	RD10ESB2
D2007	8-719-110-17	DIODE	RD10ESB2
D2008	8-719-110-17	DIODE	RD10ESB2
D2009	8-719-110-17	DIODE	RD10ESB2
D2010	8-719-110-17	DIODE	RD10ESB2
D2011	8-719-110-17	DIODE	RD10ESB2
D2012	8-719-110-17	DIODE	RD10ESB2
D2013	8-719-110-17	DIODE	RD10ESB2
D2014	8-719-110-17	DIODE	RD10ESB2
D2015	8-719-110-17	DIODE	RD10ESB2
D2016	8-719-110-17	DIODE	RD10ESB2
D2017	8-719-110-17	DIODE	RD10ESB2
D2018	8-719-110-17	DIODE	RD10ESB2
D2019	8-719-110-17	DIODE	RD10ESB2
D2020	8-719-110-17	DIODE	RD10ESB2
D2021	8-719-110-17	DIODE	RD10ESB2
D2022	8-719-110-17	DIODE	RD10ESB2

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REF. NO.	PART NO.	DESCRIPTION	VALUES	
D2023	8-719-110-17	DIODE	RD10ESB2	
D2024	8-719-110-17	DIODE	RD10ESB2	
D2025	8-719-110-17	DIODE	RD10ESB2	
D2026	8-719-110-17	DIODE	RD10ESB2	
D2027	8-719-110-17	DIODE	RD10ESB2	
D2029	8-719-110-17	DIODE	RD10ESB2	
D2030	8-719-110-17	DIODE	RD10ESB2	
D2031	8-719-110-17	DIODE	RD10ESB2	
D2032	8-719-110-17	DIODE	RD10ESB2	
D2033	8-719-991-33	DIODE	1SS133T-77	
D2034	8-719-991-33	DIODE	1SS133T-77	
D2035	8-719-110-17	DIODE	RD10ESB2	
D2039	8-719-110-17	DIODE	RD10ESB2	
D2042	8-719-110-17	DIODE	RD10ESB2	
	FERRITE BEAD			
FB2001	1-414-760-21	FERRITE	0µH	
FB2002	1-414-445-11	FERRITE	0µH	
	FILTER			
FL2001	1-239-848-21	FILTER, LOW PASS		
FL2002	1-239-848-21	FILTER, LOW PASS		
FL2003	1-239-848-21	FILTER, LOW PASS		
	IC			
IC2001	8-759-351-01	IC	TEA6422DT	
IC2002	8-759-548-56	IC	M52055FP	
IC2003	8-759-100-96	IC	UPC4558G2	
IC2004	8-752-080-04	IC	CXA2069Q	
IC2007	8-752-394-69	IC	CXD2073Q-T4	
IC2304	8-759-711-10	IC	NJU4066BM	
IC2305	8-759-686-15	IC	NJM2180M	(TE2)
	JACK			
J2001	1-573-967-12	BLOCK, (S) TERMINAL		
J2002	1-764-143-21	JACK		
J2003	1-764-143-21	JACK		
J2004	1-750-517-21	JACK BLOCK, PIN	3P	
J2005	1-815-015-11	JACK BLOCK, PIN		
J2006	1-815-015-11	JACK BLOCK, PIN		
J2007	1-750-516-21	JACK BLOCK, PIN	2P	
J2008	1-750-517-21	JACK BLOCK, PIN	3P	
J2009	1-750-516-21	JACK BLOCK, PIN	2P	

REF. NO.	PART NO.	DESCRIPTION	VALUES		
	COIL				
L2001	1-469-559-21	INDUCTOR	47µH		
L2002	1-469-555-21	INDUCTOR	10µH		
	TRANSISTOR				
Q2001	8-729-422-27	TRANSISTOR	2SD601A-Q		
Q2002	8-729-424-02	TRANSISTOR	2SB709A-QRS-TX		
Q2003	8-729-424-02	TRANSISTOR	2SB709A-QRS-TX		
Q2004	8-729-422-27	TRANSISTOR	2SD601A-Q		
Q2005	8-729-422-27	TRANSISTOR	2SD601A-Q		
Q2006	8-729-422-27	TRANSISTOR	2SD601A-Q		
Q2007	8-729-422-27	TRANSISTOR	2SD601A-Q		
Q2008	8-729-422-27	TRANSISTOR	2SD601A-Q		
Q2009	8-729-422-27	TRANSISTOR	2SD601A-Q		
Q2010	8-729-422-27	TRANSISTOR	2SD601A-Q		
Q2012	8-729-424-02	TRANSISTOR	2SB709A-QRS-TX		
Q2013	8-729-422-27	TRANSISTOR	2SD601A-Q		
Q2015	8-729-422-27	TRANSISTOR	2SD601A-Q		
Q2016	8-729-422-27	TRANSISTOR	2SD601A-Q		
Q2017	8-729-422-27	TRANSISTOR	2SD601A-Q		
Q2019	8-729-424-02	TRANSISTOR	2SB709A-QRS-TX		
Q2020	8-729-422-27	TRANSISTOR	2SD601A-Q		
Q2021	8-729-424-02	TRANSISTOR	2SB709A-QRS-TX		
Q2022	8-729-422-27	TRANSISTOR	2SD601A-Q		
Q2024	8-729-422-27	TRANSISTOR	2SD601A-Q		
Q2025	8-729-422-27	TRANSISTOR	2SD601A-Q		
Q2026	8-729-424-02	TRANSISTOR	2SB709A-QRS-TX		
Q2027	8-729-424-02	TRANSISTOR	2SB709A-QRS-TX		
Q2028	8-729-424-02	TRANSISTOR	2SB709A-QRS-TX		
Q2029	8-729-422-27	TRANSISTOR	2SD601A-Q		
Q2301	8-729-422-27	TRANSISTOR	2SD601A-Q		
Q2302	8-729-422-27	TRANSISTOR	2SD601A-Q		
	RESISTOR				
R2001	1-218-285-11	METAL CHIP	75	5%	1/10W
R2002	1-216-853-11	METAL CHIP	470K	5%	1/10W
R2003	1-218-665-11	METAL CHIP	75	0.50%	1/10W
R2004	1-218-665-11	METAL CHIP	75	0.50%	1/10W
R2005	1-218-665-11	METAL CHIP	75	0.50%	1/10W
R2006	1-216-853-11	METAL CHIP	470K	5%	1/10W
R2007	1-216-853-11	METAL CHIP	470K	5%	1/10W
R2008	1-218-665-11	METAL CHIP	75	0.50%	1/10W
R2009	1-218-665-11	METAL CHIP	75	0.50%	1/10W
R2010	1-218-665-11	METAL CHIP	75	0.50%	1/10W

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REF. NO.	PART NO.	DESCRIPTION	VALUES		
R2011	1-216-853-11	METAL CHIP	470K	5%	1/10W
R2012	1-216-853-11	METAL CHIP	470K	5%	1/10W
R2013	1-216-853-11	METAL CHIP	470K	5%	1/10W
R2014	1-216-853-11	METAL CHIP	470K	5%	1/10W
R2015	1-216-853-11	METAL CHIP	470K	5%	1/10W
R2016	1-216-853-11	METAL CHIP	470K	5%	1/10W
R2017	1-218-665-11	METAL CHIP	75	0.50%	1/10W
R2018	1-216-853-11	METAL CHIP	470K	5%	1/10W
R2019	1-216-853-11	METAL CHIP	470K	5%	1/10W
R2020	1-218-665-11	METAL CHIP	75	0.50%	1/10W
R2021	1-218-665-11	METAL CHIP	75	0.50%	1/10W
R2022	1-218-665-11	METAL CHIP	75	0.50%	1/10W
R2023	1-216-853-11	METAL CHIP	470K	5%	1/10W
R2024	1-216-853-11	METAL CHIP	470K	5%	1/10W
R2025	1-218-665-11	METAL CHIP	75	0.50%	1/10W
R2026	1-218-665-11	METAL CHIP	75	0.50%	1/10W
R2027	1-218-665-11	METAL CHIP	75	0.50%	1/10W
R2028	1-216-809-11	METAL CHIP	100	5%	1/10W
R2029	1-216-809-11	METAL CHIP	100	5%	1/10W
R2030	1-216-809-11	METAL CHIP	100	5%	1/10W
R2031	1-216-841-11	METAL CHIP	47K	5%	1/10W
R2032	1-216-845-11	METAL CHIP	100K	5%	1/10W
R2034	1-216-803-11	METAL CHIP	33	5%	1/10W
R2035	1-216-809-11	METAL CHIP	100	5%	1/10W
R2036	1-216-809-11	METAL CHIP	100	5%	1/10W
R2037	1-216-809-11	METAL CHIP	100	5%	1/10W
R2038	1-216-809-11	METAL CHIP	100	5%	1/10W
R2039	1-216-833-11	METAL CHIP	10K	5%	1/10W
R2040	1-216-857-11	METAL CHIP	1M	5%	1/10W
R2041	1-216-842-11	METAL CHIP	56K	5%	1/10W
R2042	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R2043	1-216-809-11	METAL CHIP	100	5%	1/10W
R2044	1-216-853-11	METAL CHIP	470K	5%	1/10W
R2045	1-216-853-11	METAL CHIP	470K	5%	1/10W
R2046	1-216-818-11	METAL CHIP	560	5%	1/10W
R2047	1-216-809-11	METAL CHIP	100	5%	1/10W
R2048	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R2049	1-216-809-11	METAL CHIP	100	5%	1/10W
R2050	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R2051	1-216-809-11	METAL CHIP	100	5%	1/10W
R2052	1-216-817-11	METAL CHIP	470	5%	1/10W
R2053	1-216-817-11	METAL CHIP	470	5%	1/10W
R2054	1-216-809-11	METAL CHIP	100	5%	1/10W

REF. NO.	PART NO.	DESCRIPTION	VALUES		
R2055	1-216-821-11	METAL CHIP	1K	5%	1/10W
R2056	1-216-821-11	METAL CHIP	1K	5%	1/10W
R2057	1-216-809-11	METAL CHIP	100	5%	1/10W
R2058	1-218-716-11	METAL CHIP	10K	0.50%	1/10W
R2059	1-216-817-11	METAL CHIP	470	5%	1/10W
R2060	1-216-817-11	METAL CHIP	470	5%	1/10W
R2061	1-216-817-11	METAL CHIP	470	5%	1/10W
R2062	1-216-817-11	METAL CHIP	470	5%	1/10W
R2063	1-216-809-11	METAL CHIP	100	5%	1/10W
R2064	1-216-809-11	METAL CHIP	100	5%	1/10W
R2065	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R2066	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R2067	1-216-809-11	METAL CHIP	100	5%	1/10W
R2068	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R2069	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R2070	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R2071	1-216-809-11	METAL CHIP	100	5%	1/10W
R2072	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R2073	1-216-809-11	METAL CHIP	100	5%	1/10W
R2074	1-216-809-11	METAL CHIP	100	5%	1/10W
R2075	1-216-809-11	METAL CHIP	100	5%	1/10W
R2076	1-216-821-11	METAL CHIP	1K	5%	1/10W
R2077	1-216-809-11	METAL CHIP	100	5%	1/10W
R2078	1-216-864-11	SHORT CHIP			
R2079	1-216-821-11	METAL CHIP	1K	5%	1/10W
R2080	1-216-809-11	METAL CHIP	100	5%	1/10W
R2081	1-216-809-11	METAL CHIP	100	5%	1/10W
R2082	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R2083	1-216-864-11	SHORT CHIP			
R2084	1-216-809-11	METAL CHIP	100	5%	1/10W
R2085	1-216-821-11	METAL CHIP	1K	5%	1/10W
R2086	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R2087	1-216-809-11	METAL CHIP	100	5%	1/10W
R2088	1-216-864-11	SHORT CHIP			
R2089	1-216-809-11	METAL CHIP	100	5%	1/10W
R2090	1-216-821-11	METAL CHIP	1K	5%	1/10W
R2091	1-216-821-11	METAL CHIP	1K	5%	1/10W
R2092	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R2094	1-216-864-11	SHORT CHIP			
R2096	1-216-809-11	METAL CHIP	100	5%	1/10W
R2097	1-216-809-11	METAL CHIP	100	5%	1/10W
R2098	1-216-825-11	METAL CHIP	2.2K	5%	1/10W

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REF. NO.	PART NO.	DESCRIPTION	VALUES		
R2099	1-216-809-11	METAL CHIP	100	5%	1/10W
R2100	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R2103	1-216-809-11	METAL CHIP	100	5%	1/10W
R2104	1-216-809-11	METAL CHIP	100	5%	1/10W
R2105	1-216-809-11	METAL CHIP	100	5%	1/10W
R2107	1-216-807-11	METAL CHIP	68	5%	1/10W
R2108	1-216-841-11	METAL CHIP	47K	5%	1/10W
R2109	1-216-809-11	METAL CHIP	100	5%	1/10W
R2110	1-216-809-11	METAL CHIP	100	5%	1/10W
R2111	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R2113	1-216-821-11	METAL CHIP	1K	5%	1/10W
R2116	1-216-832-11	METAL CHIP	8.2K	5%	1/10W
R2118	1-216-821-11	METAL CHIP	1K	5%	1/10W
R2121	1-216-809-11	METAL CHIP	100	5%	1/10W
R2122	1-216-821-11	METAL CHIP	1K	5%	1/10W
R2123	1-218-684-11	METAL CHIP	470	0.50%	1/10W
R2124	1-216-821-11	METAL CHIP	1K	5%	1/10W
R2125	1-218-702-11	METAL CHIP	2.7K	0.50%	1/10W
R2128	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R2130	1-216-809-11	METAL CHIP	100	5%	1/10W
R2131	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R2132	1-216-833-11	METAL CHIP	10K	5%	1/10W
R2133	1-218-674-11	METAL CHIP	180	0.50%	1/10W
R2136	1-216-816-11	METAL CHIP	390	5%	1/10W
R2137	1-218-700-11	METAL CHIP	2.2K	0.50%	1/10W
R2138	1-216-809-11	METAL CHIP	100	5%	1/10W
R2142	1-216-815-11	METAL CHIP	330	5%	1/10W
R2147	1-216-814-11	METAL CHIP	270	5%	1/10W
R2148	1-218-710-11	METAL CHIP	5.6K	0.50%	1/10W
R2149	1-216-817-11	METAL CHIP	470	5%	1/10W
R2150	1-216-821-11	METAL CHIP	1K	5%	1/10W
R2151	1-218-698-11	METAL CHIP	1.8K	0.50%	1/10W
R2152	1-218-694-11	METAL CHIP	1.2K	0.50%	1/10W
R2153	1-216-821-11	METAL CHIP	1K	5%	1/10W
R2155	1-216-837-11	METAL CHIP	22K	5%	1/10W
R2156	1-216-841-11	METAL CHIP	47K	5%	1/10W
R2157	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R2159	1-216-832-11	METAL CHIP	8.2K	5%	1/10W
R2164	1-218-710-11	METAL CHIP	5.6K	0.50%	1/10W
R2166	1-216-818-11	METAL CHIP	560	5%	1/10W
R2169	1-216-842-11	METAL CHIP	56K	5%	1/10W
R2173	1-216-818-11	METAL CHIP	560	5%	1/10W
R2174	1-218-686-11	METAL CHIP	560	0.50%	1/10W
R2175	1-216-817-11	METAL CHIP	470	5%	1/10W
R2176	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R2177	1-216-809-11	METAL CHIP	100	5%	1/10W
R2178	1-218-676-11	METAL CHIP	220	0.50%	1/10W
R2182	1-216-864-11	SHORT CHIP			
R2183	1-216-813-11	METAL CHIP	220	5%	1/10W
R2184	1-218-704-11	METAL CHIP	3.3K	0.50%	1/10W
R2185	1-218-684-11	METAL CHIP	470	0.50%	1/10W
R2186	1-218-688-11	METAL CHIP	680	0.50%	1/10W
R2187	1-216-864-11	SHORT CHIP			
R2193	1-216-809-11	METAL CHIP	100	5%	1/10W
R2194	1-216-817-11	METAL CHIP	470	5%	1/10W
R2195	1-216-817-11	METAL CHIP	470	5%	1/10W
R2196	1-216-817-11	METAL CHIP	470	5%	1/10W
R2197	1-216-817-11	METAL CHIP	470	5%	1/10W
R2198	1-216-853-11	METAL CHIP	470K	5%	1/10W
R2199	1-216-853-11	METAL CHIP	470K	5%	1/10W
R2330	1-216-864-11	SHORT CHIP			
R2331	1-216-833-11	METAL CHIP	10K	5%	1/10W
R2332	1-216-813-11	METAL CHIP	220	5%	1/10W
R2333	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R2341	1-216-832-11	METAL CHIP	8.2K	5%	1/10W
R2342	1-218-698-11	METAL CHIP	1.8K	0.50%	1/10W
R2343	1-216-832-11	METAL CHIP	8.2K	5%	1/10W
R2344	1-218-698-11	METAL CHIP	1.8K	0.50%	1/10W
R2345	1-216-864-11	SHORT CHIP			
R2346	1-216-864-11	SHORT CHIP			
R2347	1-216-843-11	METAL CHIP	68K	5%	1/10W
R2348	1-216-838-11	METAL CHIP	27K	5%	1/10W
R2349	1-216-833-11	METAL CHIP	10K	5%	1/10W
R2350	1-216-797-11	METAL CHIP	10	5%	1/10W
R2353	1-216-823-11	METAL CHIP	1.5K	5%	1/10W
R2354	1-216-841-11	METAL CHIP	47K	5%	1/10W
R2355	1-218-890-11	METAL CHIP	62K	0.50%	1/10W
R2356	1-216-842-11	METAL CHIP	56K	5%	1/10W
R2357	1-216-833-11	METAL CHIP	10K	5%	1/10W
R2358	1-216-839-11	METAL CHIP	33K	5%	1/10W
R2359	1-216-824-11	METAL CHIP	1.8K	5%	1/10W
R2360	1-216-861-11	METAL CHIP	2.2M	5%	1/10W
R2363	1-216-864-11	SHORT CHIP			
R2365	1-216-833-11	METAL CHIP	10K	5%	1/10W
R2366	1-216-829-11	METAL CHIP	4.7K	5%	1/10W

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REF. NO.	PART NO.	DESCRIPTION	VALUES		
R2369	1-216-864-11	SHORT CHIP			
R2375	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R2376	1-216-864-11	SHORT CHIP			
R2377	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R2379	1-216-842-11	METAL CHIP	56K	5%	1/10W
R2380	1-216-821-11	METAL CHIP	1K	5%	1/10W
R2381	1-218-867-11	METAL CHIP	6.8K	0.50%	1/10W
R2382	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R2383	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R2384	1-216-833-11	METAL CHIP	10K	5%	1/10W
R2385	1-216-835-11	METAL CHIP	15K	5%	1/10W
R2386	1-216-837-11	METAL CHIP	22K	5%	1/10W
R2387	1-216-821-11	METAL CHIP	1K	5%	1/10W
R2390	1-216-847-11	METAL CHIP	150K	5%	1/10W

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*	**A-1316-566-A**	**G BOARD, COMPLETE**	
*	4-374-846-01	COVER, CAPACITOR, CAP TYPE	
	4-382-854-11	SCREW (M3X10), P, SW (+)	
*	7-651-000-50	GREASE,SILICON (G-746) 200G	

CAPACITOR

C5001	1-164-645-11	CERAMIC	1000pF	10%	500V
C5002	1-164-645-11	CERAMIC	1000pF	10%	500V
C5006	1-104-665-11	ELECT	100µF	20%	25V
C5007	1-164-645-11	CERAMIC	1000pF	10%	500V
C5008	1-164-645-11	CERAMIC	1000pF	10%	500V
C5009	1-126-953-11	ELECT	2200µF	20%	35V
C5010	1-126-953-11	ELECT	2200µF	20%	35V
C5011	1-164-645-11	CERAMIC	1000pF	10%	500V
C5012	1-164-645-11	CERAMIC	1000pF	10%	500V
C5015	1-115-758-11	ELECT	470µF	20%	16V
C5016	1-126-942-61	ELECT	1000µF	20%	25V
C5017	1-126-942-61	ELECT	1000µF	20%	25V
C5018	1-126-952-11	ELECT	1000µF	20%	35V
C5019	1-126-952-11	ELECT	1000µF	20%	35V
C5020	1-110-626-11	ELECT	330µF	20%	160V
C5021	1-115-771-51	ELECT	0.0047F	20%	16V
C5022	1-126-947-11	ELECT	47µF	20%	35V
C5024	1-107-888-11	ELECT	47µF	20%	25V
C5025	1-126-947-11	ELECT	47µF	20%	35V
C5026	1-126-947-11	ELECT	47µF	20%	35V
C5027	1-126-951-11	ELECT	470µF	20%	35V
C5028	1-126-951-11	ELECT	470µF	20%	35V
C5029	1-107-639-11	ELECT	47µF	20%	160V
C5030	1-126-947-11	ELECT	47µF	20%	35V
C5031	1-126-768-11	ELECT	2200µF	20%	16V
C5038	1-126-947-11	ELECT	47µF	20%	35V
C5039	1-126-947-11	ELECT	47µF	20%	35V
C5040	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C5041	1-126-767-11	ELECT	1000µF	20%	16V
C5042	1-126-963-11	ELECT	4.7µF	20%	50V
C5043	1-126-935-11	ELECT	470µF	20%	16V
C5047	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C5049	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C5050	1-128-554-11	ELECT	330µF	20%	63V
C5051	1-126-961-11	ELECT	2.2µF	20%	50V
C5053	1-126-967-11	ELECT	47µF	20%	50V
C5054	1-126-955-11	ELECT	4700µF	20%	35V
C5055	1-126-933-11	ELECT	100µF	20%	16V
C6001	1-126-967-11	ELECT	47µF	20%	50V
C6002	1-104-666-11	ELECT	220µF	20%	25V
C6004	1-126-967-11	ELECT	47µF	20%	50V
C6008	1-117-228-11	MYLAR	2.2µF	10%	450V
⚠ C6012	1-119-894-51	CERAMIC	2200pF	20%	250V
⚠ C6013	1-119-894-51	CERAMIC	2200pF	20%	250V
⚠ C6014	1-104-708-11	MYLAR	0.47µF	20%	250V
C6015	1-161-964-91	CERAMIC	0.0047µF		250V
C6016	1-161-964-91	CERAMIC	0.0047µF		250V
C6017	1-162-964-11	CERAMIC CHIP	0.001µF	10%	50V
C6018	1-162-974-11	CERAMIC CHIP	0.01µF		50V
C6019	1-126-968-11	ELECT	100µF	20%	50V
C6020	1-126-963-11	ELECT	4.7µF	20%	50V
C6021	1-126-964-11	ELECT	10µF	20%	50V
C6022	1-161-964-91	CERAMIC	0.0047µF		250V
C6023	1-161-964-91	CERAMIC	0.0047µF		250V
C6025	1-136-479-11	FILM	0.001µF	5%	100V
C6029	1-136-165-00	FILM	0.1µF	5%	50V
C6030	1-126-947-11	ELECT	47µF	20%	35V
C6031	1-137-750-11	ELECT	1500µF	20%	250V
C6032	1-137-750-11	ELECT	1500µF	20%	250V
C6041	1-125-969-91	CERAMIC	680pF	10%	1KV
C6042	1-125-969-91	CERAMIC	680pF	10%	1KV
⚠ C6043	1-104-706-11	MYLAR	0.22µF	20%	250V
C6046	1-126-968-11	ELECT	100µF	20%	50V
C6047	1-165-954-11	FILM	56000pF	3%	800V

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	REF. NO.	PART NO.	DESCRIPTION	VALUES
		CONNECTOR		
*	CN5001	1-564-508-11	PLUG, CONNECTOR	5P
*	CN5002	1-564-507-11	PLUG, CONNECTOR	4P
*	CN5003	1-564-510-11	PLUG, CONNECTOR	7P
*	CN5004	1-766-177-11	PIN, CONNECTOR (PC BOARD)	9P
	CN5005	1-695-915-11	TAB (CONTACT)	
	CN5006	1-695-915-11	TAB (CONTACT)	
	CN5007	1-695-915-11	TAB (CONTACT)	
*	CN6005	1-580-843-11	PIN, CONNECTOR (POWER)	
		DIODE		
	D5001	8-719-083-67	DIODE	UDZSTE-1720B
	D5002	8-719-060-89	DIODE	D4SBS6-F
	D5003	8-719-060-89	DIODE	D4SBS6-F
	D5004	8-719-083-45	DIODE	31DF4N-FC5
	D5005	8-719-083-45	DIODE	31DF4N-FC5
	D5006	8-719-052-37	DIODE	F10P04Q
	D5007	8-719-988-61	DIODE	1SS355TE-17
	D5008	8-719-028-45	DIODE	D2L20U
	D5009	8-719-028-45	DIODE	D2L20U
	D5010	8-719-200-31	DIODE	21DQ05
	D5011	8-719-988-61	DIODE	1SS355TE-17
	D5012	8-719-056-93	DIODE	UDZ-TE-17-18B
	D5013	8-719-069-56	DIODE	UDZSTE-176.2B
	D5014	8-719-988-61	DIODE	1SS355TE-17
	D5015	8-719-988-61	DIODE	1SS355TE-17
	D5016	8-719-083-44	DIODE	FSQ05A04
	D5017	8-719-073-25	DIODE	S1VBA20
	D5018	8-719-056-84	DIODE	UDZ-TE-17-7.5B
	D5019	8-719-988-61	DIODE	1SS355TE-17
	D5020	8-719-988-61	DIODE	1SS355TE-17
	D5021	8-719-988-61	DIODE	1SS355TE-17
	D5022	8-719-988-61	DIODE	1SS355TE-17
	D5023	8-719-988-61	DIODE	1SS355TE-17
	D5024	8-719-988-61	DIODE	1SS355TE-17
	D5025	8-719-988-61	DIODE	1SS355TE-17
	D5026	8-719-988-61	DIODE	1SS355TE-17
	D5027	8-719-069-54	DIODE	UDZSTE-175.1B
	D5031	8-719-988-61	DIODE	1SS355TE-17
	D5033	8-719-988-61	DIODE	1SS355TE-17
	D5034	8-719-083-60	DIODE	UDZSTE-174.7B
	D6001	8-719-988-61	DIODE	1SS355TE-17
	D6002	8-719-948-45	DIODE	ERA22-08

	REF. NO.	PART NO.	DESCRIPTION	VALUES	
	D6003	8-719-070-63	DIODE	PDZ10B-115	
	D6004	8-719-988-61	DIODE	1SS355TE-17	
	D6005	8-719-988-61	DIODE	1SS355TE-17	
	D6006	8-719-063-70	DIODE	D1NL20U	
	D6007	8-719-022-99	DIODE	D6SB60L	
	D6009	8-719-083-60	DIODE	UDZSTE-174.7B	
	D6011	8-719-988-61	DIODE	1SS355TE-17	
	D6012	6-500-158-01	DIODE	10ERA60-TA2B5	
	D6019	8-719-083-60	DIODE	UDZSTE-174.7B	
	D6023	8-719-068-00	DIODE	ERC04-06SE	
	D6024	8-719-068-00	DIODE	ERC04-06SE	
	D6030	8-719-063-70	DIODE	D1NL20U	
		FUSE			
⚠	F6001	1-576-193-11	FUSE	6.3A	125V
		FERRITE BEAD			
	FB5001	1-410-396-41	FERRITE	0.45µH	
	FB5002	1-410-396-41	FERRITE	0.45µH	
	FB5003	1-410-396-41	FERRITE	0.45µH	
	FB5004	1-410-396-41	FERRITE	0.45µH	
	FB5005	1-410-396-41	FERRITE	0.45µH	
	FB5006	1-410-396-41	FERRITE	0.45µH	
	FB6001	1-410-396-41	FERRITE	0.45µH	
	FB6004	1-216-295-91	SHORT CHIP		
	FB6005	1-216-295-91	SHORT CHIP		
	FB6006	1-216-295-91	SHORT CHIP		
	FB6007	1-216-295-91	SHORT CHIP		
	FB6013	1-410-397-21	FERRITE	1.1µH	
	FB6014	1-410-397-21	FERRITE	1.1µH	
	FB6015	1-410-397-21	FERRITE	1.1µH	
	FB6016	1-410-397-21	FERRITE	1.1µH	
		FUSE HOLDER			
	FH6001	1-533-223-11	FUSE HOLDER		
	FH6002	1-533-223-11	FUSE HOLDER		
		IC			
	IC501	8-749-012-13	IC	DM-58	
	IC5002	8-759-103-93	IC	UPC393C	
	IC5003	8-759-701-84	IC	NJM7905FA	
	IC5004	8-759-640-19	IC	PQ1CG2032FZ	
	IC5005	8-759-198-31	IC	UPC1093J-1-T	
	IC5006	8-759-471-81	IC	PQ05RD11	
	IC6003	8-759-670-30	IC	MCZ3001D	

NOTE: The components identified by shading and ⚠ mark are critical for safety. Replace only with part number specified.

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REF. NO.	PART NO.	DESCRIPTION	VALUES
	CHIP CONDUCTOR		
JR5002	1-216-864-11	SHORT CHIP	
JR5003	1-216-295-91	SHORT CHIP	
	COIL		
L5001	1-412-523-41	INDUCTOR	6.8µH
L5002	1-412-523-41	INDUCTOR	6.8µH
L5003	1-412-529-11	INDUCTOR	22µH
L5004	1-412-531-31	INDUCTOR	33µH
L5005	1-412-527-11	INDUCTOR	15µH
L5006	1-412-533-21	INDUCTOR	47µH
L5007	1-412-533-21	INDUCTOR	47µH
L5008	1-412-529-11	INDUCTOR	22µH
L5009	1-412-529-11	INDUCTOR	22µH
L5010	1-412-521-31	INDUCTOR	4.7µH
L5011	1-412-521-31	INDUCTOR	4.7µH
L5012	1-406-663-21	INDUCTOR	47µH
L5013	1-412-525-31	INDUCTOR	10µH
L5014	1-406-663-21	INDUCTOR	47µH
L5015	1-424-862-11	INDUCTOR	33µH
L5016	1-406-663-21	INDUCTOR	47µH
L5017	1-412-537-31	INDUCTOR	100µH
⚠ L6001	1-437-479-11	TRANSFORMER, LINE FILTER	
⚠ L6002	1-437-479-11	TRANSFORMER, LINE FILTER	
L6003	1-424-862-11	INDUCTOR	33µH
	PHOTO COUPLER		
PH6001	8-749-924-35	PHOTO COUPLER	ON3171-R
⚠ PH6002	8-749-924-35	PHOTO COUPLER	ON3171-R
	IC LINK		
⚠ PS5001	1-533-597-31	IC LINK	5A 90V
⚠ PS5002	1-533-597-31	IC LINK	5A 90V
	TRANSISTOR		
Q5001	8-729-050-50	TRANSISTOR	2SD1782K-T146-R
Q5002	8-729-120-28	TRANSISTOR	2SC1623-L5L6
Q5003	8-729-026-49	TRANSISTOR	2SA1037AK-T146-R
Q5004	8-729-120-28	TRANSISTOR	2SC1623-L5L6
Q5005	8-729-027-23	TRANSISTOR	DTA114EKA-T146
Q5006	8-729-901-87	TRANSISTOR	2SC2411K-CQ
Q5007	8-729-026-49	TRANSISTOR	2SA1037AK-T146-R
Q6005	8-729-052-32	TRANSISTOR	IRFIB7N50A-LF31
Q6006	8-729-052-32	TRANSISTOR	IRFIB7N50A-LF31

REF. NO.	PART NO.	DESCRIPTION	VALUES
	RESISTOR		
R5005	1-218-867-11	METAL CHIP	6.8K 0.50% 1/10W
R5006	1-216-833-11	METAL CHIP	10K 5% 1/10W
R5007	1-249-377-11	CARBON	0.47 5% 1/4W
R5010	1-247-903-00	CARBON	1M 5% 1/4W
R5011	1-216-818-11	METAL CHIP	560 5% 1/10W
R5012	1-216-361-00	METAL OXIDE	0.22 5% 2W
R5013	1-216-833-11	METAL CHIP	10K 5% 1/10W
R5014	1-216-829-11	METAL CHIP	4.7K 5% 1/10W
R5015	1-218-708-11	METAL CHIP	4.7K 0.50% 1/10W
R5016	1-216-833-11	METAL CHIP	10K 5% 1/10W
R5017	1-216-829-11	METAL CHIP	4.7K 5% 1/10W
R5018	1-216-821-11	METAL CHIP	1K 5% 1/10W
R5019	1-216-857-11	METAL CHIP	1M 5% 1/10W
R5020	1-216-821-11	METAL CHIP	1K 5% 1/10W
R5021	1-216-821-11	METAL CHIP	1K 5% 1/10W
R5022	1-218-708-11	METAL CHIP	4.7K 0.50% 1/10W
R5023	1-218-750-11	METAL CHIP	270K 0.50% 1/10W
R5024	1-218-682-11	METAL CHIP	390 0.50% 1/10W
R5025	1-218-697-11	METAL CHIP	1.6K 0.50% 1/10W
R5026	1-216-833-11	METAL CHIP	10K 5% 1/10W
R5027	1-216-821-11	METAL CHIP	1K 5% 1/10W
R5028	1-216-821-11	METAL CHIP	1K 5% 1/10W
R5029	1-216-837-11	METAL CHIP	22K 5% 1/10W
R5030	1-216-837-11	METAL CHIP	22K 5% 1/10W
R5032	1-249-415-11	CARBON	680 5% 1/4W
R5034	1-216-833-11	METAL CHIP	10K 5% 1/10W
R5035	1-216-819-11	METAL CHIP	680 5% 1/10W
R5036	1-216-819-11	METAL CHIP	680 5% 1/10W
R5037	1-216-821-11	METAL CHIP	1K 5% 1/10W
R5038	1-216-821-11	METAL CHIP	1K 5% 1/10W
R5039	1-216-864-11	SHORT CHIP	
R5040	1-216-833-11	METAL CHIP	10K 5% 1/10W
R5041	1-215-866-11	METAL OXIDE	330 5% 1W
R5042	1-216-833-11	METAL CHIP	10K 5% 1/10W
R5043	1-216-821-11	METAL CHIP	1K 5% 1/10W
R5044	1-216-821-11	METAL CHIP	1K 5% 1/10W
R5045	1-216-832-11	METAL CHIP	8.2K 5% 1/10W
R5047	1-216-833-11	METAL CHIP	10K 5% 1/10W
R5048	1-216-833-11	METAL CHIP	10K 5% 1/10W
R6002	1-240-251-11	CEMENTED	6.8 5% 10W

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G H2

REF. NO.	PART NO.	DESCRIPTION	VALUES		
R6003	1-260-328-11	CARBON	1K	5%	1/2W
R6004	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R6006	1-216-430-11	METAL OXIDE	390	5%	1W
R6007	1-216-823-11	METAL CHIP	1.5K	5%	1/10W
R6008	1-216-845-11	METAL CHIP	100K	5%	1/10W
R6015	1-219-776-11	CARBON	2.2M	10%	1/2W
R6036	1-218-715-11	METAL CHIP	9.1K	0.50%	1/10W
R6037	1-215-481-00	METAL	330K	1%	1/4W
R6038	1-215-481-00	METAL	330K	1%	1/4W
R6039	1-216-851-11	METAL CHIP	330K	5%	1/10W
R6040	1-215-481-00	METAL	330K	1%	1/4W
R6041	1-218-668-11	METAL CHIP	100	0.50%	1/10W
R6042	1-218-719-11	METAL CHIP	13K	0.50%	1/10W
R6045	1-218-675-11	METAL CHIP	200	0.50%	1/10W
R6046	1-216-813-11	METAL CHIP	220	5%	1/10W
R6047	1-216-813-11	METAL CHIP	220	5%	1/10W
R6050	1-249-417-11	CARBON	1K	5%	1/4W
R6054	1-249-393-11	CARBON	10	5%	1/4W
R6056	1-260-131-11	CARBON	470K	5%	1/2W
R6057	1-260-131-11	CARBON	470K	5%	1/2W
R6058	1-249-393-11	CARBON	10	5%	1/4W
R6062	1-216-833-11	METAL CHIP	10K	5%	1/10W
R6063	1-216-833-11	METAL CHIP	10K	5%	1/10W
R6064	1-202-933-61	FUSIBLE	0.1	10%	1/2W
R6076	1-243-979-71	METAL OXIDE	0.1	5%	2W
R6080	1-243-979-71	METAL OXIDE	0.1	5%	2W
R6081	1-249-393-11	CARBON	10	5%	1/4W

RELAY

⚠ RY6002	1-755-395-11	RELAY (AC POWER)	
⚠ RY6003	1-755-395-11	RELAY (AC POWER)	

TRANSFORMER

⚠ T6001	1-437-436-11	CONVERTER TRANSFORMER (PIT)	
⚠ T6004	1-435-675-11	TRANSFORMER, STANDBY	

THERMISTOR

TH6002	1-804-475-21	POSISTOR	

VARISTOR

VD6001	1-801-073-31	VARISTOR	ERZV14D471

H2

REF. NO.	PART NO.	DESCRIPTION	VALUES		
*	A-1401-059-A	H2 BOARD, MOUNTED			

CONNECTOR

* CN9201	1-564-520-11	PLUG, CONNECTOR	5P		
* CN9202	1-564-521-11	PLUG, CONNECTOR	6P		

RESISTOR

R9201	1-218-684-11	METAL CHIP	470	0.50%	1/10W
R9202	1-218-684-11	METAL CHIP	470	0.50%	1/10W
R9203	1-218-684-11	METAL CHIP	470	0.50%	1/10W
R9204	1-218-684-11	METAL CHIP	470	0.50%	1/10W
R9205	1-218-688-11	METAL CHIP	680	0.50%	1/10W
R9206	1-218-688-11	METAL CHIP	680	0.50%	1/10W
R9207	1-218-692-11	METAL CHIP	1K	0.50%	1/10W
R9208	1-218-696-11	METAL CHIP	1.5K	0.50%	1/10W
R9209	1-218-700-11	METAL CHIP	2.2K	0.50%	1/10W
R9210	1-218-704-11	METAL CHIP	3.3K	0.50%	1/10W
R9211	1-218-712-11	METAL CHIP	6.8K	0.50%	1/10W

SWITCH

S9201	1-572-198-11	SWITCH, KEYBOARD
S9202	1-572-198-11	SWITCH, KEYBOARD
S9203	1-572-198-11	SWITCH, KEYBOARD
S9204	1-572-198-11	SWITCH, KEYBOARD
S9205	1-572-198-11	SWITCH, KEYBOARD
S9206	1-572-198-11	SWITCH, KEYBOARD
S9207	1-572-198-11	SWITCH, KEYBOARD
S9208	1-572-198-11	SWITCH, KEYBOARD
S9209	1-572-198-11	SWITCH, KEYBOARD
S9210	1-572-198-11	SWITCH, KEYBOARD
S9211	1-572-198-11	SWITCH, KEYBOARD
S9212	1-572-198-11	SWITCH, KEYBOARD

H1 H4 S

	REF. NO.	PART NO.	DESCRIPTION	VALUES		
H1						
*		**A-1401-060-A**	**H1 BOARD, MOUNTED**			
		CAPACITOR				
	C9101	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
		CONNECTOR				
*	CN9101	1-564-508-11	PLUG, CONNECTOR	5P		
*	CN9102	1-564-506-11	PLUG, CONNECTOR	3P		
		DIODE				
	D9101	8-719-053-43	DIODE	SLR-325VCT31		
	D9102	8-719-053-43	DIODE	SLR-325VCT31		
		IC				
	IC9101	8-719-066-43	DIODE	GP1U28Y		
		RESISTOR				
	R9101	1-216-833-11	METAL CHIP	10K	5%	1/10W
	R9102	1-216-809-11	METAL CHIP	100	5%	1/10W
	R9103	1-216-813-11	METAL CHIP	220	5%	1/10W
	R9104	1-216-813-11	METAL CHIP	220	5%	1/10W
		SWITCH				
	S9101	1-571-532-21	SWITCH, TACTILE			
H4						
*		**A-1401-536-A**	**H4 BOARD, MOUNTED**			
		CAPACITOR				
	C9400	1-126-964-11	ELECT	10µF	20%	50V
	C9401	1-126-964-11	ELECT	10µF	20%	50V
	C9402	1-125-891-11	CERAMIC CHIP	0.47µF	10%	10V
	C9403	1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
	C9405	1-125-891-11	CERAMIC CHIP	0.47µF	10%	10V
		CONNECTOR				
*	CN9401	1-564-526-11	PLUG, CONNECTOR	11P		

	REF. NO.	PART NO.	DESCRIPTION	VALUES		
		DIODE				
	D9400	8-719-110-17	DIODE	RD10ESB2		
	D9401	8-719-110-17	DIODE	RD10ESB2		
	D9402	8-719-110-17	DIODE	RD10ESB2		
	D9403	8-719-110-17	DIODE	RD10ESB2		
	D9404	8-719-110-17	DIODE	RD10ESB2		
	D9405	8-719-110-17	DIODE	RD10ESB2		
		JACK				
	J9401	1-770-361-11	TERMINAL BLOCK, S			
		RESISTOR				
	R9400	1-216-853-11	METAL CHIP	470K	5%	1/10W
	R9401	1-216-853-11	METAL CHIP	470K	5%	1/10W
	R9402	1-218-285-11	METAL CHIP	75	5%	1/10W
	R9403	1-218-285-11	METAL CHIP	75	5%	1/10W
	R9406	1-216-821-11	METAL CHIP	1K	5%	1/10W
	R9407	1-218-285-11	METAL CHIP	75	5%	1/10W
S						
*		**A-1391-148-A**	**S BOARD, MOUNTED**			
		CAPACITOR				
		CONNECTOR				
*	CN3001	1-564-506-11	PLUG, CONNECTOR	3P		
		DIODE				
	D3001	8-719-109-88	DIODE	RD5.6ESB1		
		SWITCH				
	S3002	1-756-063-21	BATTERY, SOLAR			

REF. NO.	PART NO.	DESCRIPTION	VALUES
		ACCESSORIES AND PACKING	
*	4-091-919-01	BAG, PROTECTION	
*	4-091-088-01	CARTON, INDIVIDUAL	
*	4-091-087-01	CUSHION, LOWER	
*	4-091-086-01	CUSHION, UPPER	
	4-088-847-12	MANUAL, INSTRUCTION (ENGLISH)	
	4-088-847-22	MANUAL, INSTRUCTION (FRENCH)	
	4-088-847-32	MANUAL, INSTRUCTION (SPANISH)	
	A-1100-667-A	PACKING GROUP (SET)	
*	4-085-133-01	PWB PROTECTION SHEET	
*	4-091-920-01	SHEET, PROTECTION	
*	4-091-089-01	TRAY	

REF. NO.	PART NO.	DESCRIPTION	VALUES
		REMOTE COMMANDER	
	1-476-864-11	REMOTE COMMANDER (RM-Y909)	
	4-081-888-01	BATTERY COVER (FOR RM-Y909)	

9-965-935-06

Sony Corporation
Sony Technology Center
Technical Services
Service Promotion Department

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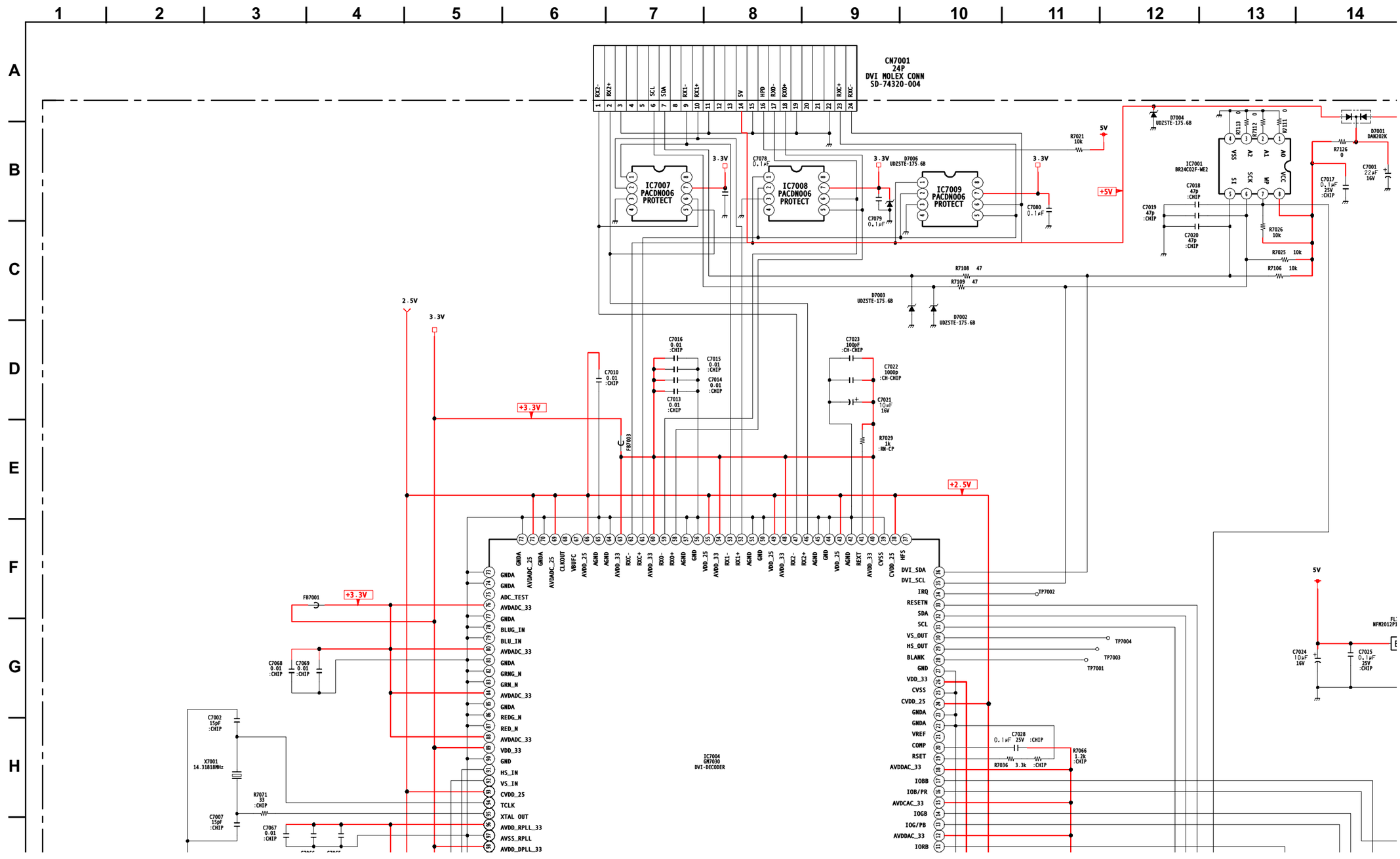
UD BOARD SCHEMATIC DIAGRAM The UD board is not field repairable. If service is required, use the following part number to order a complete replacement board.
A-1300-324-A UD Board, Complete



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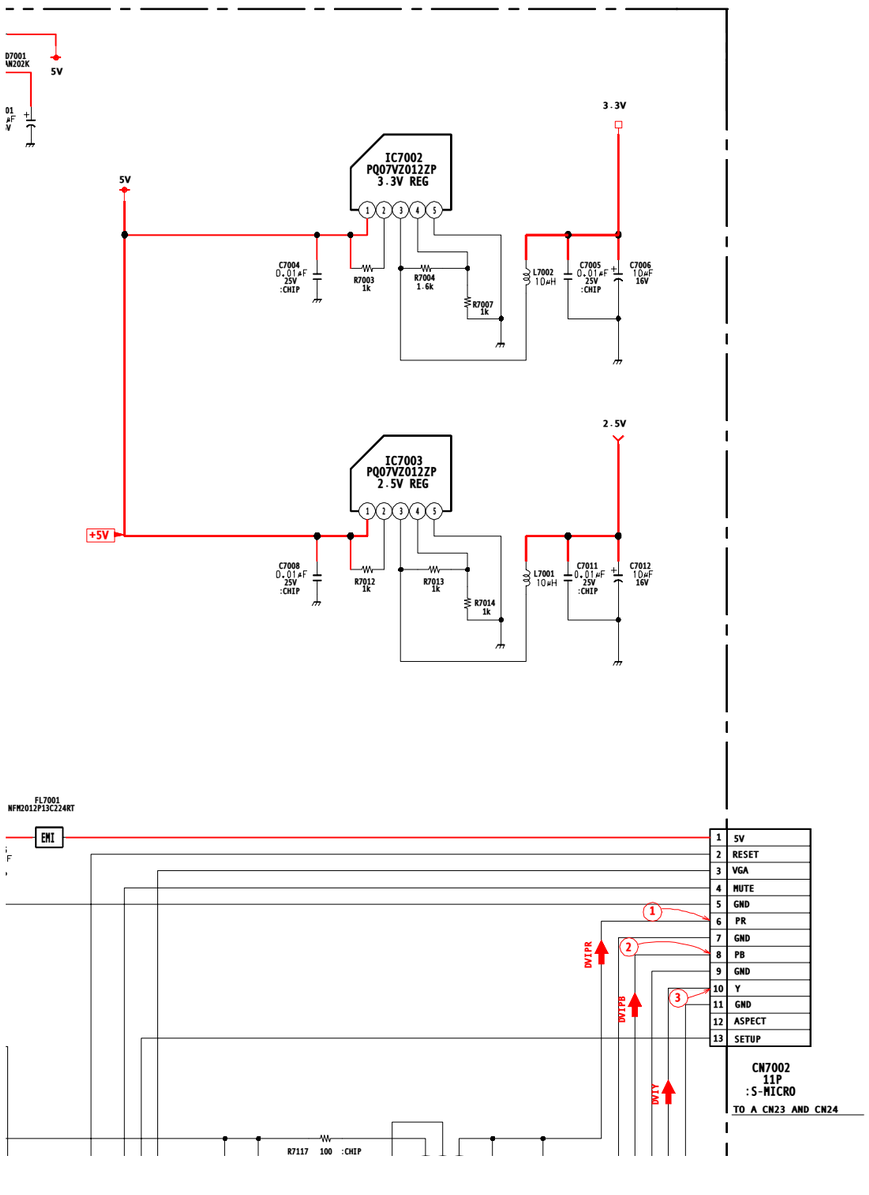

UD BOARD WAVEFORMS

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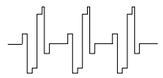		
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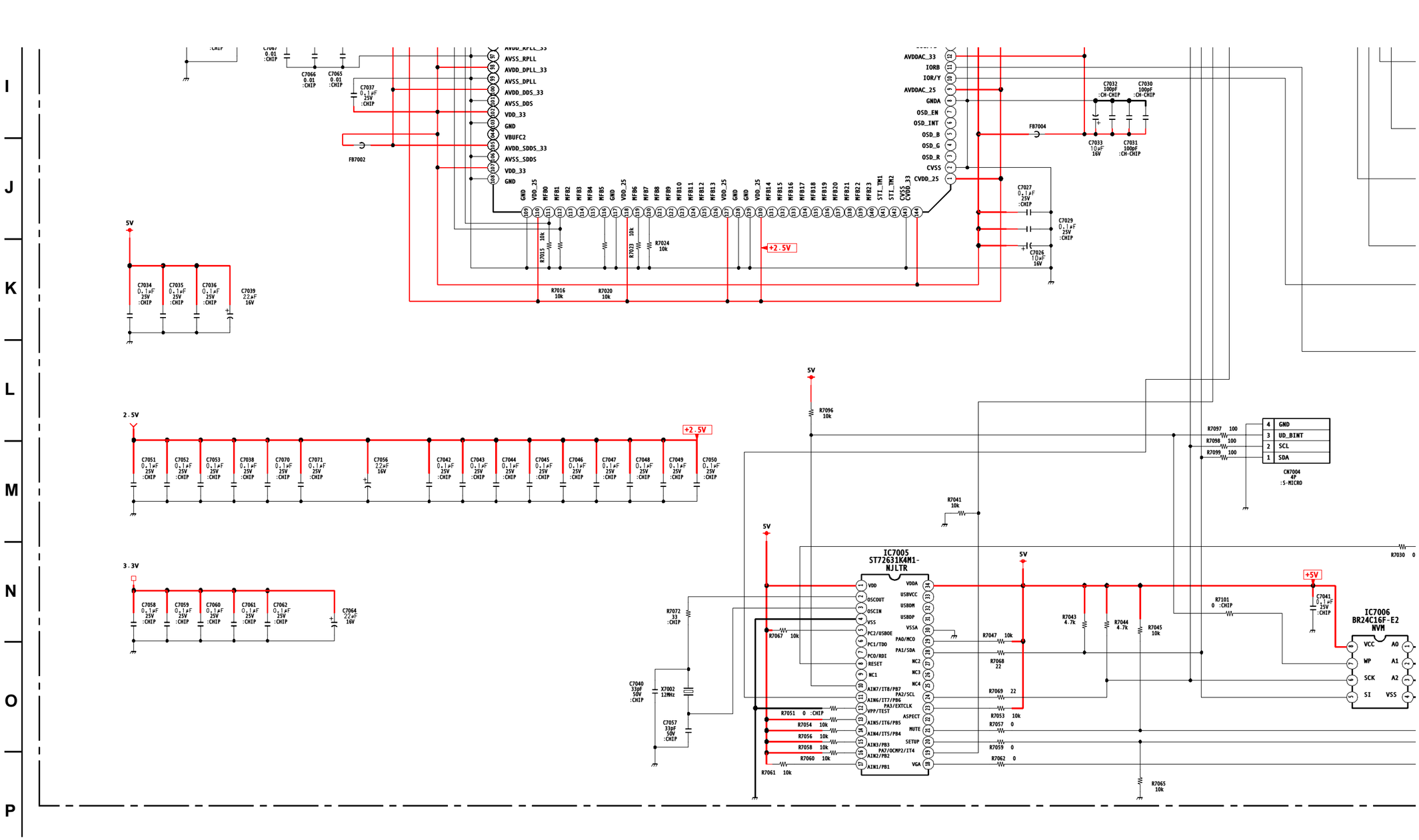
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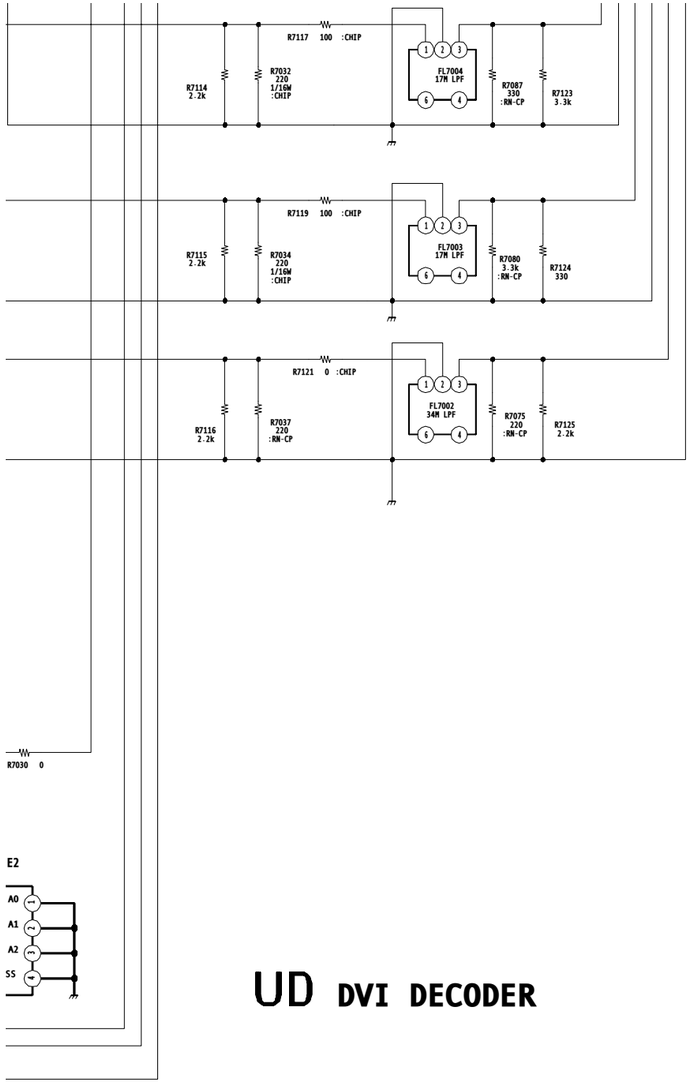
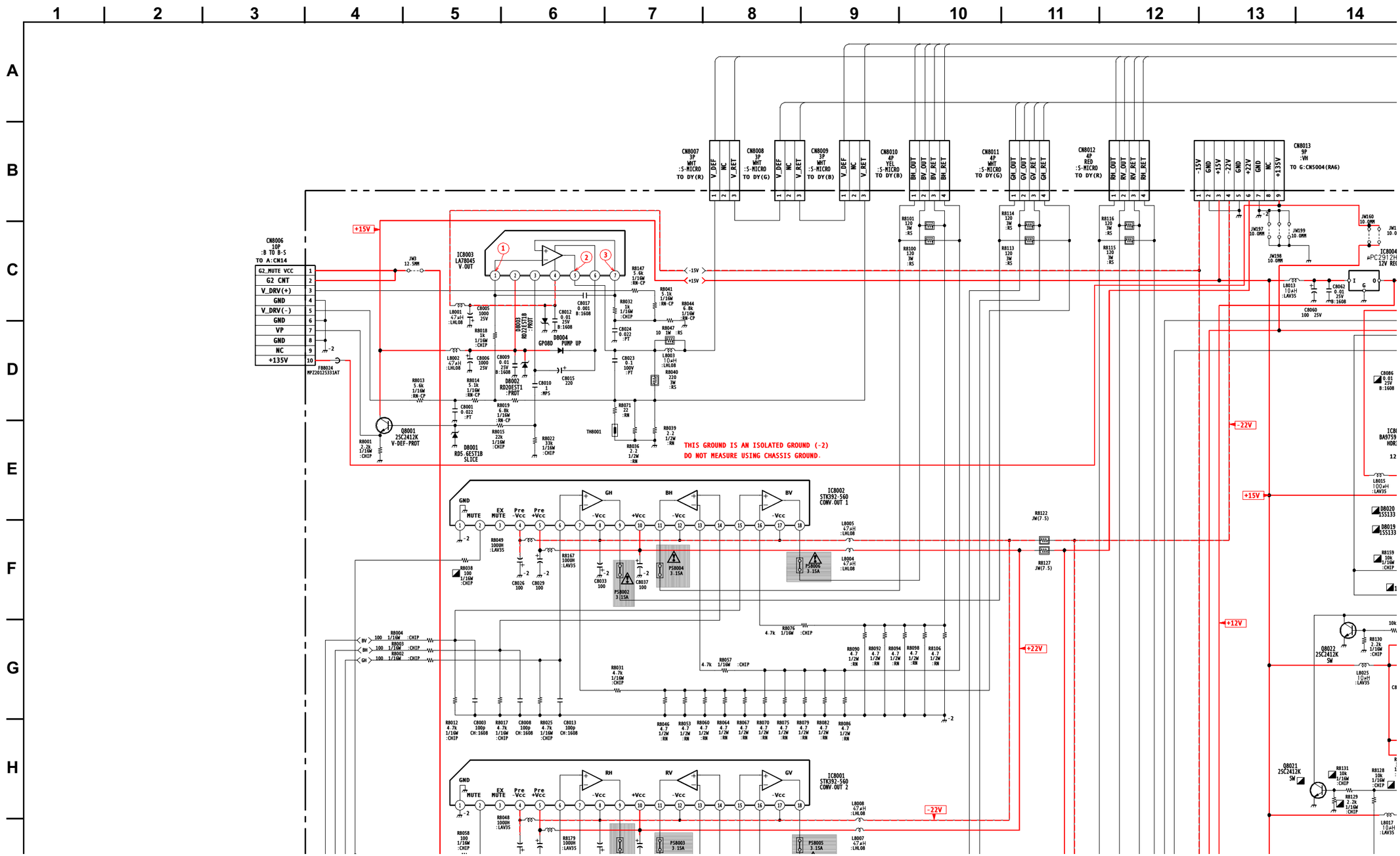
VDD_33
GND
VBUFC2
AVDD_SDDS_33
AVSS_SDDS
VDD_33
GND
FB7002
C7037 0.1uF 25V :CHIP
C7066 0.01 :CHIP
C7065 0.01 :CHIP
AVDDAC_33
IORB
IOR/Y
AVDDAC_25
GNDA
OSD_EN
OSD_INT
OSD_B
OSD_G
OSD_R
CVSS
CVDD_25
FB7004
C7032 100pF :CH-CHIP
C7030 100pF :CH-CHIP
C7033 10uF 16V
C7031 100pF :CH-CHIP
C7027 0.1uF 25V :CHIP
C7029 0.1uF 25V :CHIP
C7026 10uF 16V
GND VDD_25 MFB0 MFB1 MFB2 MFB3 MFB4 MFB5 GND VDD_25 MFB6 MFB7 MFB8 MFB9 MFB10 MFB11 MFB12 MFB13 VDD_25 GND GND VDD_25 MFB14 MFB15 MFB16 MFB17 MFB18 MFB19 MFB20 MFB21 MFB22 MFB23 STI_TM1 STI_TM2 CVSS CVDD_33
R7015 10k
R7016 10k
R7023 10k
R7020 10k
R7024 10k
+2.5V
5V
C7034 0.1uF 25V :CHIP
C7035 0.1uF 25V :CHIP
C7036 0.1uF 25V :CHIP
C7039 2.2uF 16V
2.5V
C7051 0.1uF 25V :CHIP
C7052 0.1uF 25V :CHIP
C7053 0.1uF 25V :CHIP
C7038 0.1uF 25V :CHIP
C7070 0.1uF 25V :CHIP
C7071 0.1uF 25V :CHIP
C7056 22uF 16V
C7042 0.1uF 25V :CHIP
C7043 0.1uF 25V :CHIP
C7044 0.1uF 25V :CHIP
C7045 0.1uF 25V :CHIP
C7046 0.1uF 25V :CHIP
C7047 0.1uF 25V :CHIP
C7048 0.1uF 25V :CHIP
C7049 0.1uF 25V :CHIP
C7050 0.1uF 25V :CHIP
+2.5V
3.3V
C7058 0.1uF 25V :CHIP
C7059 0.1uF 25V :CHIP
C7060 0.1uF 25V :CHIP
C7061 0.1uF 25V :CHIP
C7062 0.1uF 25V :CHIP
C7064 22uF 16V
5V
R7096 10k
R7097 100
R7098 100
R7099 100
4 GND
3 UD_BINT
2 SCL
1 SDA
CN7004 4P :S-MICRO
R7041 10k
IC7005 ST72631K4M1-NJLTR
VDD OSCOUT OSCIN VSS PC2/USBOE PC1/TDO PC0/RDI RESET NC1 AIN7/IT8/PB7 AIN6/IT7/PB6 VPP/TEST AIN5/IT6/PB5 AIN4/IT5/PB4 AIN3/PB3 AIN2/PB2 AIN1/PB1
VDDA USBVCC USBDM USBDP VSSA PA0/MCO PA1/SDA NC2 NC3 NC4 PA2/SCL PA3/EXTCLK ASPECT MUTE SETUP PA7/OCMP2/IT4 VGA
R7072 33 :CHIP
C7040 33pF 50V :CHIP
X7002 12MHz
C7057 33pF 50V :CHIP
R7067 10k
R7051 0 :CHIP
R7054 10k
R7056 10k
R7058 10k
R7060 10k
R7061 10k
R7047 10k
R7068 22
R7069 22
R7053 10k
R7057 0
R7059 0
R7062 0
R7043 4.7k
R7044 4.7k
R7045 10k
R7065 10k
R7030 0
R7101 0 :CHIP
+5V
C7041 0.1uF 25V :CHIP
IC7006 BR24C16F-E2 NVM
VCC A0 WP A1 SCK A2 SI VSS



UD DVI DECODER

9-965-935-01<RA6>UD

D BOARD SCHEMATIC DIAGRAM



15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25

CN8015 2P :LARGE

CN8016 4P WHT :S-MICRO TO HV BLOCK

+135V

HV BLOCK

HV (R) TO PICTURE TUBE R
HV (G) TO PICTURE TUBE G
HV (B) TO PICTURE TUBE B

CN8022 7P WHT :S-MICRO TO CB:CN7304

1	200V
2	NC
3	GND
4	NC
5	NC
6	H(+)
7	H(-)

CN8023 4P BLK :S-MICRO

IC8004 C2912HF (I2) 12V REG

IC8008 BA9759F-E2 HDRIVE

IC8007 NJM2903

IC8006 NJM2903

T8004 :LOT

T8005 NX-4006/X :FBT

Q8035 2SJ585LS-CC11 SW

Q8037 2SC2412K AMP

Q8036 2SA1037AK AMP

Q8032 2SC2412K BUFF

Q8005 2SA1037AK BUFF

Q8029 2SC2412K SW

D8034 ERC07-15L DAMPER1

D8035 ERC07-15L DAMPER1

D8031 RD18ES71B :PROT

D8039 RGP02-17PKG23

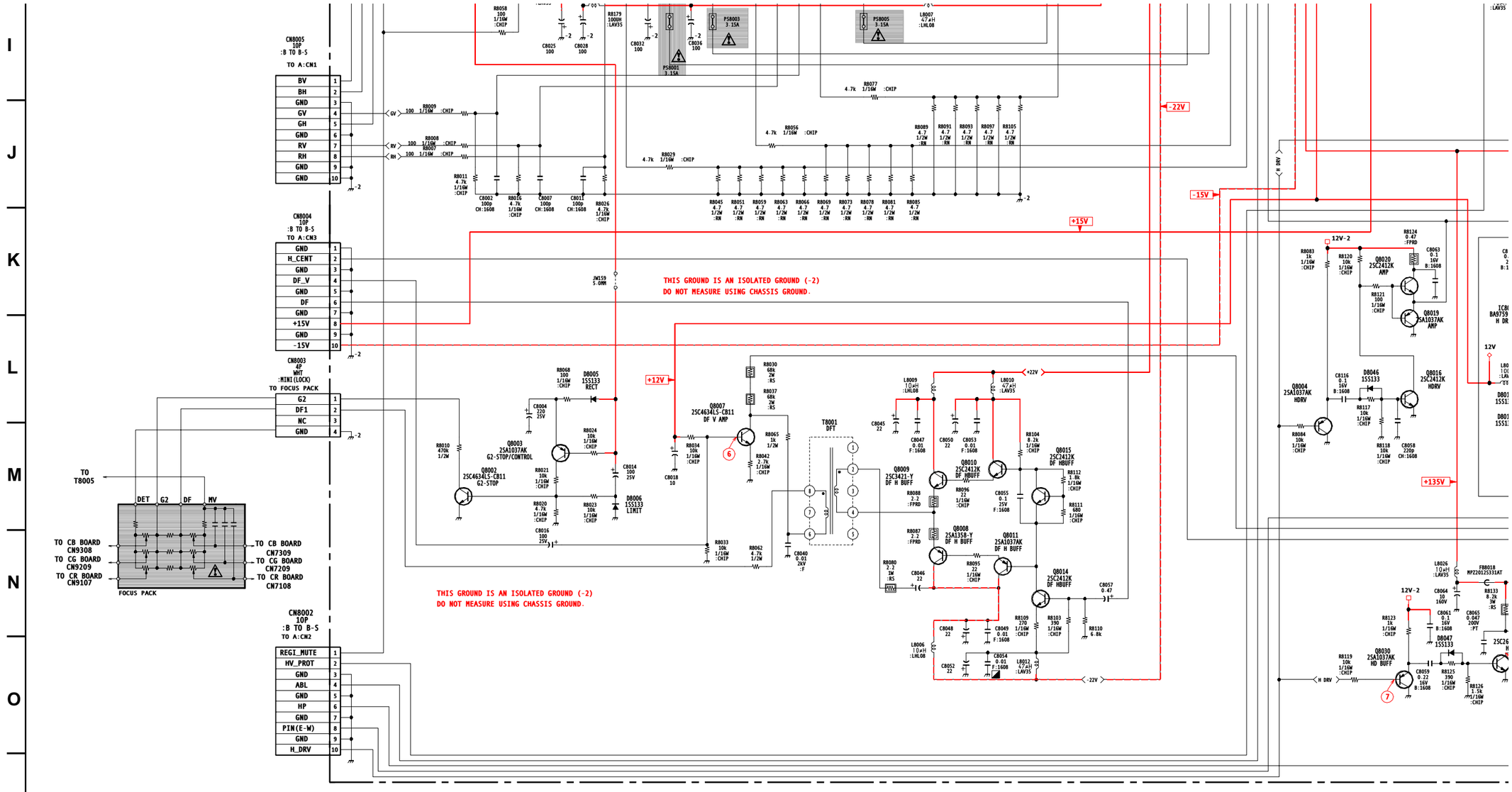
D8037 D2L20U-F

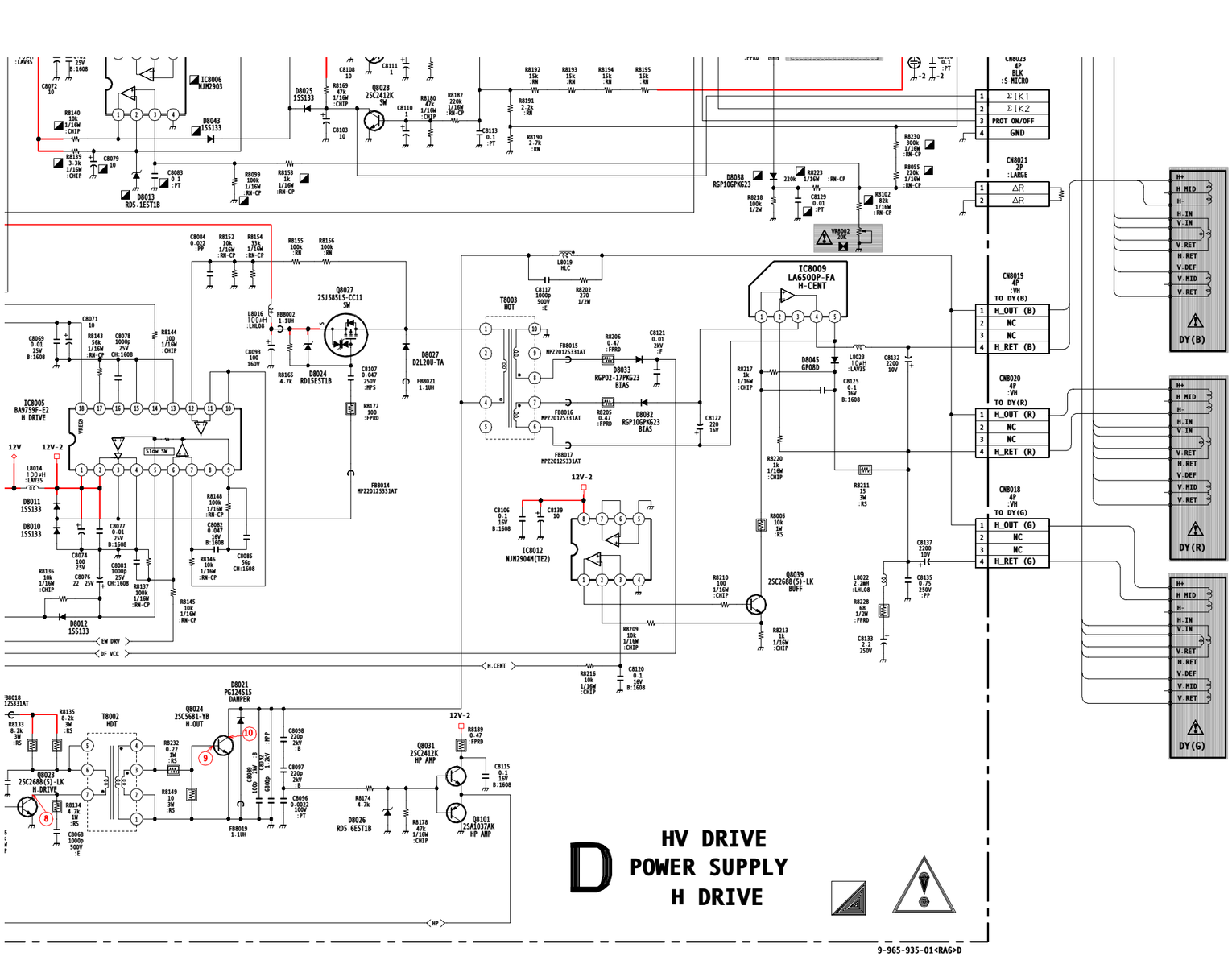
D8036 RD15ES71B

D8028 RD15ES71B

D8014 RD5.1ES71B

D8038 1NB12-140

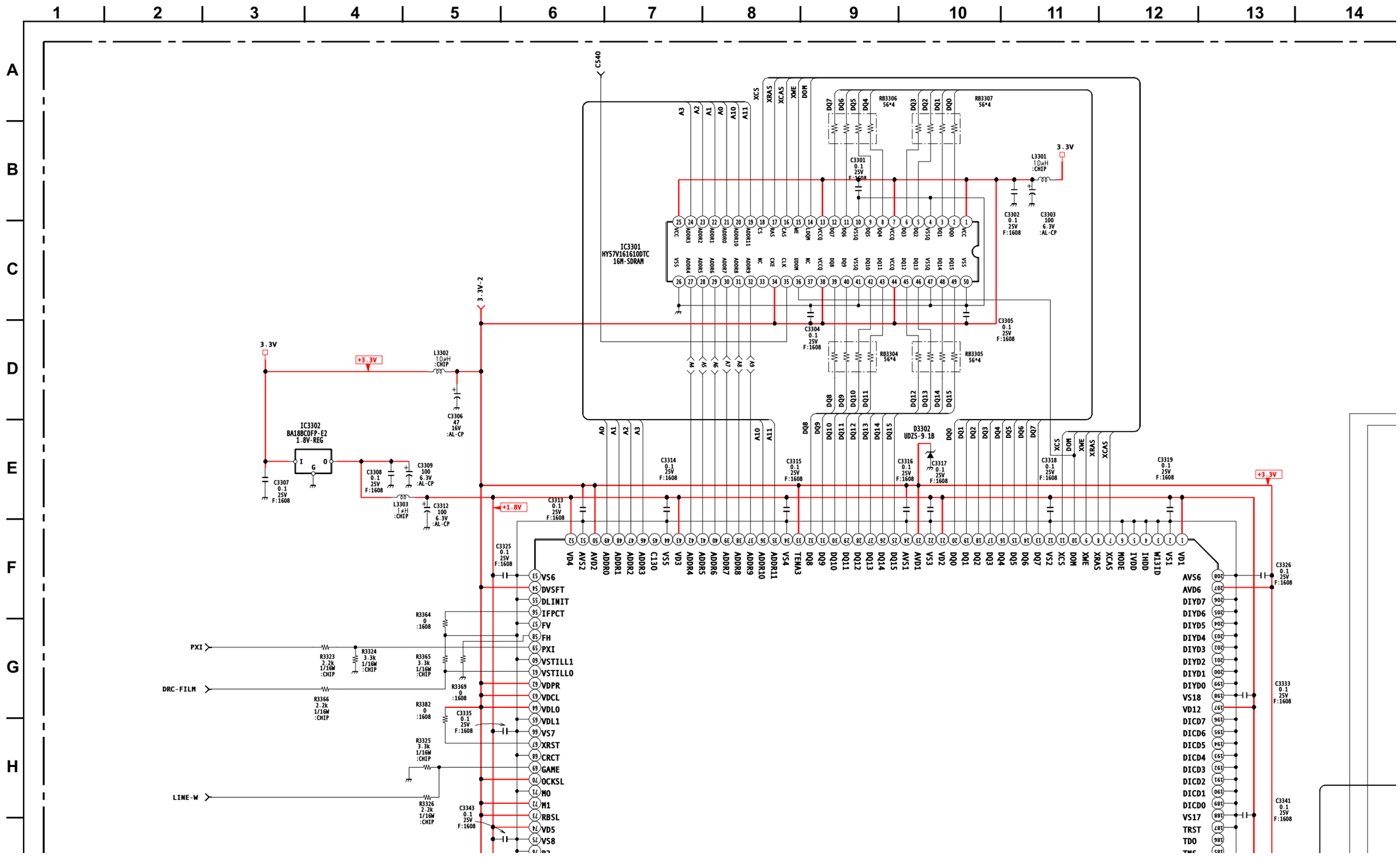

CN8005
10P
:B TO B-S
TO A:CN1
BV 1
BH 2
GND 3
GV 4
GH 5
GND 6
RV 7
RH 8
GND 9
GND 10
CN8004
10P
:B TO B-S
TO A:CN3
GND 1
H_CENT 2
GND 3
DF_V 4
GND 5
DF 6
GND 7
+15V 8
GND 9
-15V 10
CN8003
4P
WHT
:MINI(LOCK)
TO FOCUS PACK
G2 1
DF1 2
NC 3
GND 4
TO T8005
DET G2 DF MV
FOCUS PACK
TO CB BOARD CN9308
TO CG BOARD CN9209
TO CR BOARD CN9107
TO CB BOARD CN7309
TO CG BOARD CN7209
TO CR BOARD CN7108
CN8002
10P
:B TO B-S
TO A:CN2
REGI_MUTE 1
HV_PROT 2
GND 3
ABL 4
GND 5
HP 6
GND 7
PIN(E-W) 8
GND 9
H_DRV 10
THIS GROUND IS AN ISOLATED GROUND (-2)
DO NOT MEASURE USING CHASSIS GROUND.
THIS GROUND IS AN ISOLATED GROUND (-2)
DO NOT MEASURE USING CHASSIS GROUND.
-22V
+15V
-15V
+12V
+135V
12V-2
12V
Q8003 2SA1037AK G2-STOP/CONTROL
Q8002 2SC4634LS-CB11 G2-STOP
Q8007 2SC4634LS-CB11 DF V AMP
T8001 DFT
Q8009 2SC3421-Y DF H BUFF
Q8010 2SC2412K DF HBUFF
Q8015 2SC2412K DF HBUFF
Q8008 2SA1358-Y DF H BUFF
Q8011 2SA1037AK DF H BUFF
Q8014 2SC2412K DF HBUFF
Q8020 2SC2412K AMP
Q8019 2SA1037AK AMP
Q8004 2SA1037AK HDRV
Q8016 2SC2412K HDRV
Q8030 2SA1037AK HD BUFF
D8005 1SS133 RECT
D8006 1SS133 LIMIT
D8046 1SS133
D8047 1SS133
PS8001 3.15A
PS8003 3.15A
PS8005 3.15A
IC8 BA9759 H DR
FB8018 MPZ2012S331AT
JW159 5.0MM



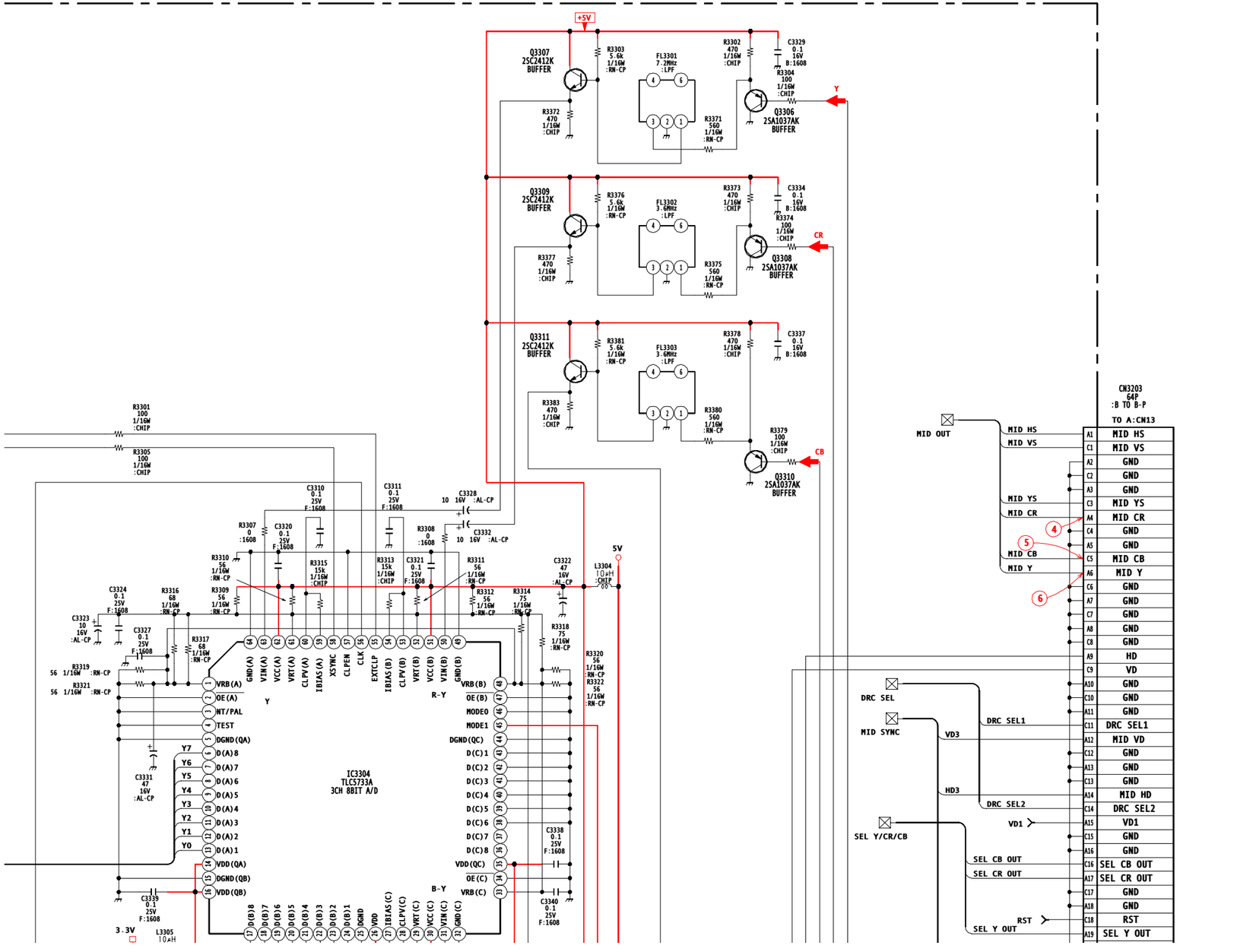
D HV DRIVE POWER SUPPLY H DRIVE

9-965-935-01<RA6>D

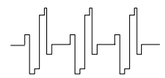
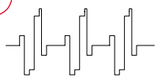
B BOARD SCHEMATIC DIAGRAM (1 OF 2) The B board is not field repairable. If service is required, use the following part number to order a complete replacement board.
A-1136-271-A B Board, Complete



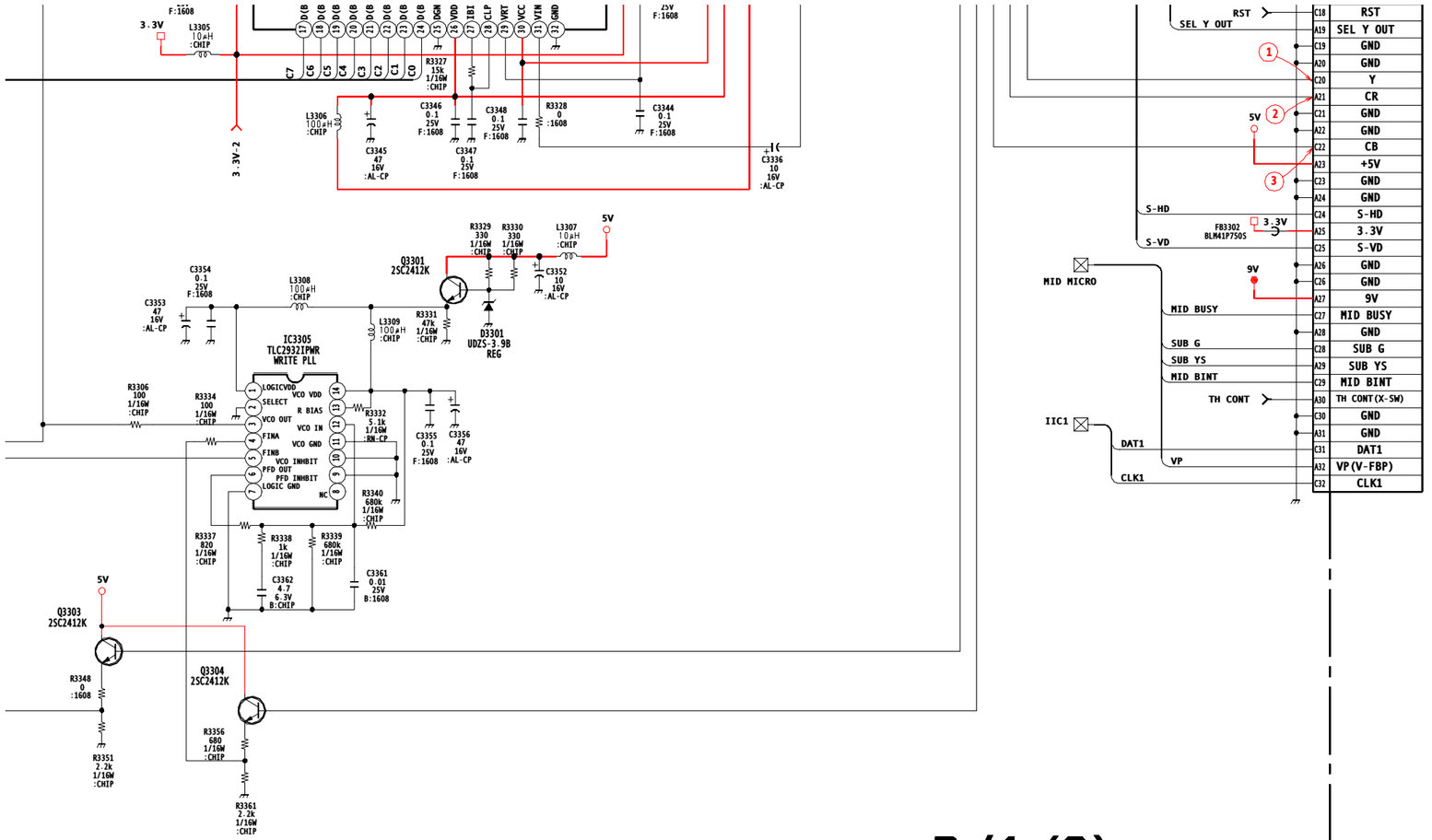
15 16 17 18 19 20 21 22 23 24



B BOARD WAVEFORMS

1 1.5 Vp-p (H)	2  1.3 Vp-p (H)
3 1.1 Vp-p (H)	4  1.4 Vp-p (H)
5 1.2 Vp-p (H)	6 1.5 Vp-p (H)

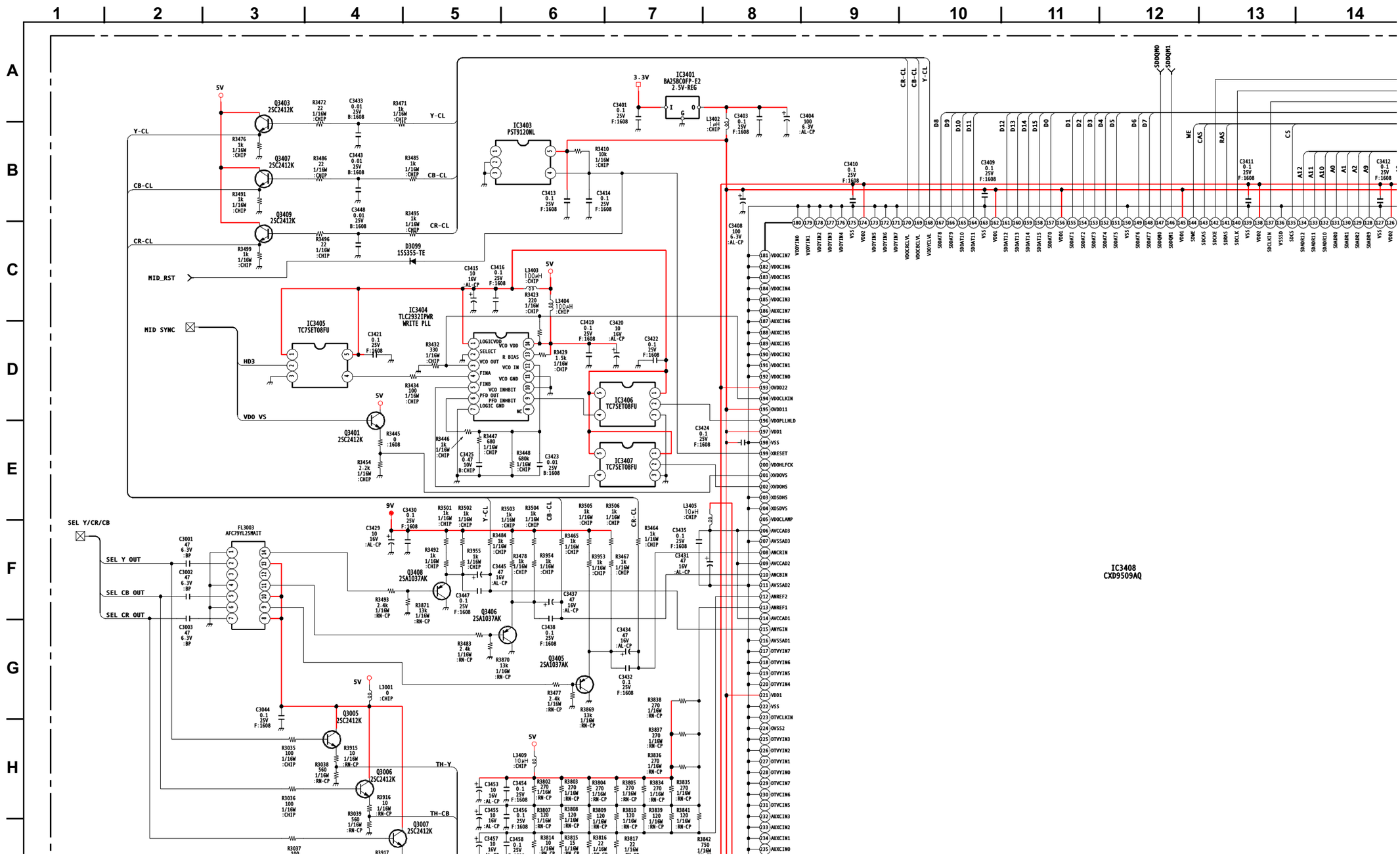
IC3303
CXD2095AQ
DRC-MF
IC3306
TLC2933IPWR
READ PLL
Q3302
2SC2412K
Q3305
2SA1037AK
5V
3.3V
+1.8V
+3.3V
XDRCVS
XDRCHS
C540
DRCDCLK
DRC

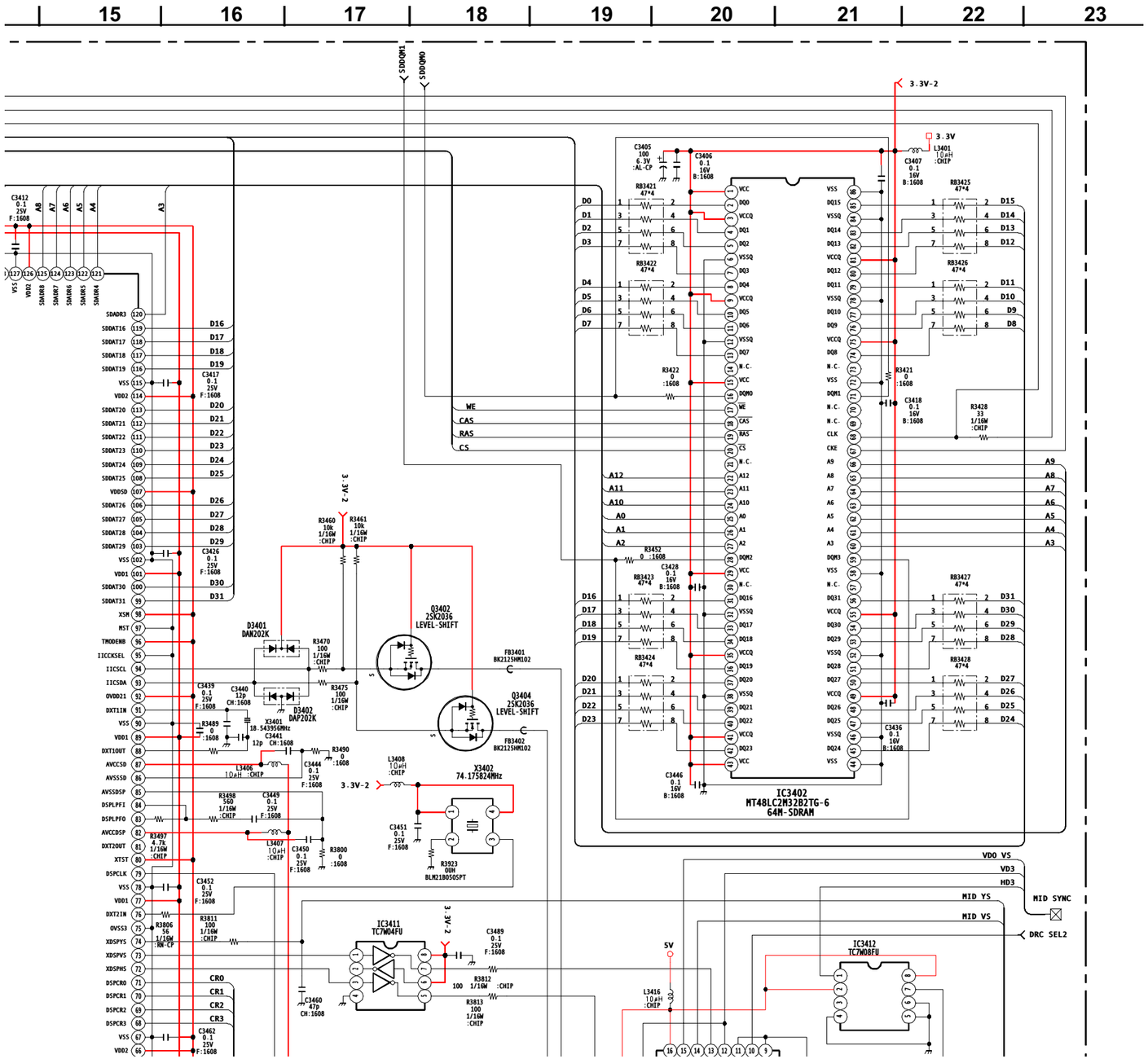

3.3V
L3305 10uH :CHIP
F:1608
D7 D6 D5 D4 D3 D2 D1 D0 HGM VDD TBI CLP VRT VCC VIN GND
C7 C6 C5 C4 C3 C2 C1 C0
R3327 15k 1/16W :CHIP
3.3V-2
L3306 100uH :CHIP
C3345 47 16V :AL-CP
C3346 0.1 25V F:1608
C3347 0.1 25V F:1608
C3348 0.1 25V F:1608
R3328 0 :1608
C3344 0.1 25V F:1608
C3336 10 16V :AL-CP
5V
R3329 330 1/16W :CHIP
R3330 330 1/16W :CHIP
L3307 10uH :CHIP
Q3301 2SC2412K
C3352 10 16V :AL-CP
D3301 UDZS-3.9B REG
C3354 0.1 25V F:1608
C3353 47 16V :AL-CP
L3308 100uH :CHIP
L3309 100uH :CHIP
R3331 47k 1/16W :CHIP
IC3305 TLC2932IPWR WRITE PLL
LOGICVDD
SELECT
VCO OUT
FINA
FINB
PFD OUT
LOGIC GND
VCO VDD
R BIAS
VCO IN
VCO GND
VCO INHBIT
PFD INHBIT
NC
R3306 100 1/16W :CHIP
R3334 100 1/16W :CHIP
R3332 5.1k 1/16W :RN-CP
C3355 0.1 25V F:1608
C3356 47 16V :AL-CP
R3340 680k 1/16W :CHIP
R3337 820 1/16W :CHIP
R3338 1k 1/16W :CHIP
R3339 680k 1/16W :CHIP
C3362 4.7 6.3V B:CHIP
C3361 0.01 25V B:1608
5V
Q3303 2SC2412K
R3348 0 :1608
R3351 2.2k 1/16W :CHIP
Q3304 2SC2412K
R3356 680 1/16W :CHIP
R3361 2.2k 1/16W :CHIP
RST
SEL Y OUT
1
5V
2
3
S-HD
S-VD
FB3302 BLM41P750S
3.3V
MID MICRO
9V
MID BUSY
SUB G
SUB YS
MID BINT
TH CONT
IIC1
DAT1
VP
CLK1
C18 RST
A19 SEL Y OUT
C19 GND
A20 GND
C20 Y
A21 CR
C21 GND
A22 GND
C22 CB
A23 +5V
C23 GND
A24 GND
C24 S-HD
A25 3.3V
C25 S-VD
A26 GND
C26 GND
A27 9V
C27 MID BUSY
A28 GND
C28 SUB G
A29 SUB YS
C29 MID BINT
A30 TH CONT(X-SW)
C30 GND
A31 GND
C31 DAT1
A32 VP(V-FBP)
C32 CLK1

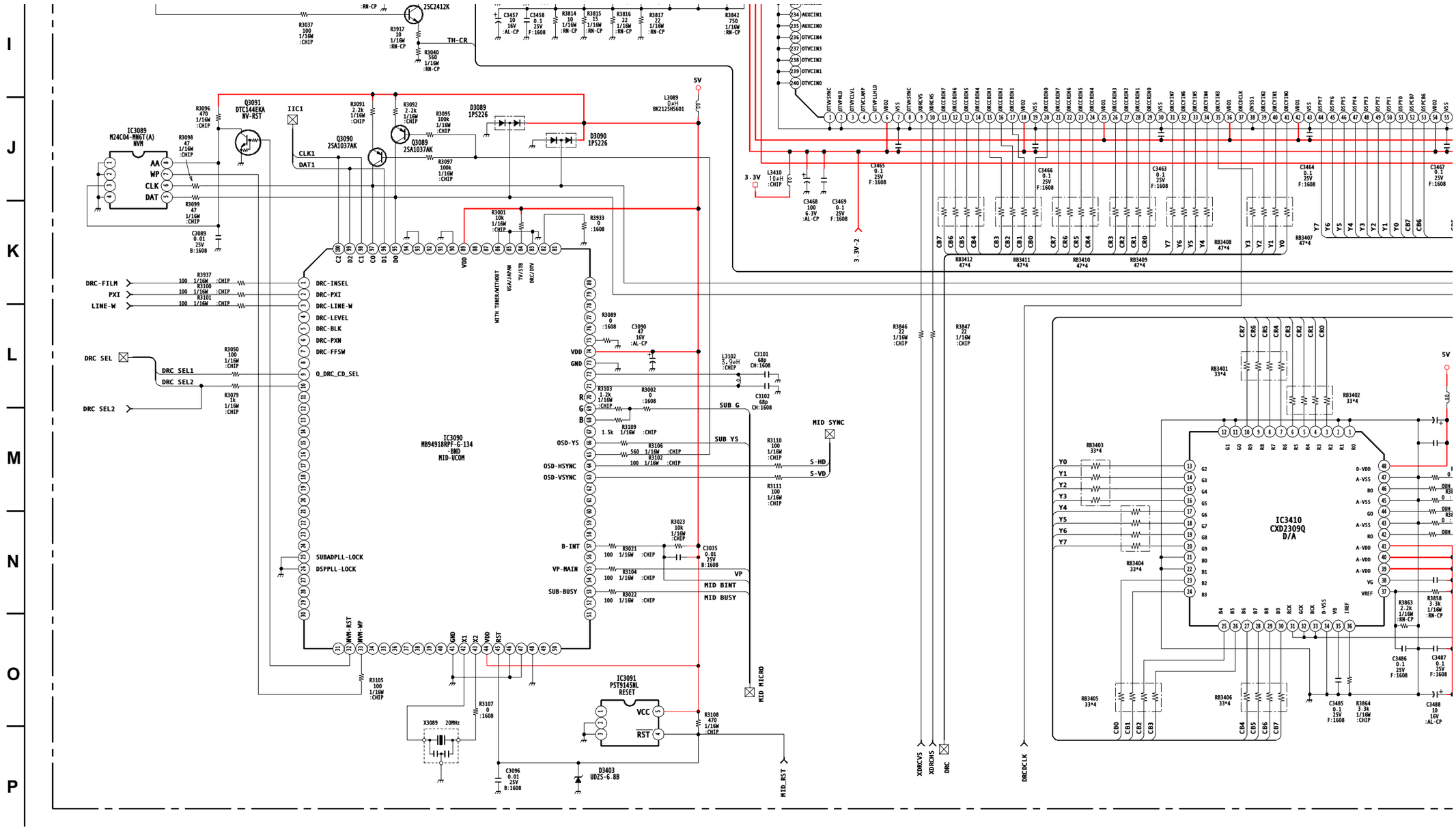
B (1/2)

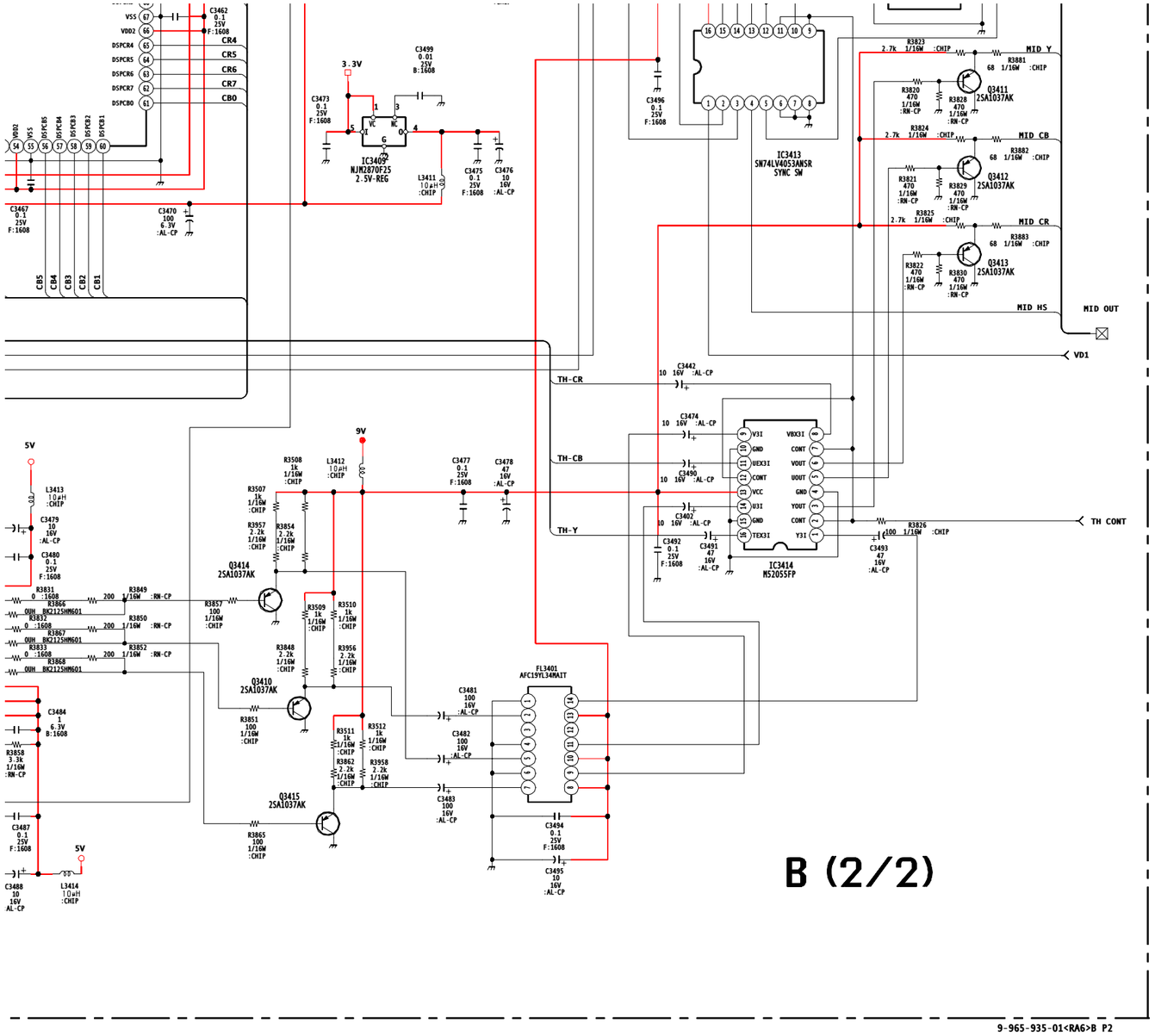
AD-DRC

B BOARD SCHEMATIC DIAGRAM (2 OF 2)




15
16
17
18
19
20
21
22
23
SDDQM1
SDDQM0
3.3V-2
3.3V
L3401
10uH
:CHIP
C3407
0.1
10V
B:1608
C3405
100
6.3V
:AL-CP
C3406
0.1
16V
B:1608
RB3421
47*4
RB3422
47*4
RB3423
47*4
RB3424
47*4
RB3425
47*4
RB3426
47*4
RB3427
47*4
RB3428
47*4
R3422
0
:1608
R3421
0
:1608
R3452
0 :1608
R3428
33
1/16W
:CHIP
C3418
0.1
10V
B:1608
C3428
0.1
16V
B:1608
C3436
0.1
16V
B:1608
C3446
0.1
16V
B:1608
D0
D1
D2
D3
D4
D5
D6
D7
D8
D9
D10
D11
D12
D13
D14
D15
D16
D17
D18
D19
D20
D21
D22
D23
D24
D25
D26
D27
D28
D29
D30
D31
A0
A1
A2
A3
A4
A5
A6
A7
A8
A9
A10
A11
A12
WE
CAS
RAS
CS
DQM0
DQM1
DQM2
DQM3
IC3402
MT48LC2M32B2TG-6
64M-SDRAM
C3412
0.1
25V
F:1608
C3417
0.1
25V
F:1608
C3426
0.1
25V
F:1608
R3460
10k
1/16W
:CHIP
R3461
10k
1/16W
:CHIP
D3401
DAN202K
D3402
DAP202K
R3470
100
1/16W
:CHIP
R3475
100
1/16W
:CHIP
Q3402
2SK2036
LEVEL-SHIFT
Q3404
2SK2036
LEVEL-SHIFT
FB3401
BK2125HM102
FB3402
BK2125HM102
C3439
0.1
25V
F:1608
C3440
12p
CH:1608
X3401
18.543956MHz
C3441
12p
CH:1608
C3444
0.1
25V
F:1608
R3489
0
:1608
R3490
0
:1608
L3406
10uH :CHIP
L3408
10uH
:CHIP
X3402
74.175824MHz
C3451
0.1
25V
F:1608
R3923
00H
BLM21B050SPT
R3458
560
1/16W
:CHIP
C3449
0.1
25V
F:1608
R3497
4.7k
1/16W
:CHIP
L3407
10uH
:CHIP
C3450
0.1
25V
F:1608
R3800
0
:1608
C3452
0.1
25V
F:1608
R3811
100
1/16W
:CHIP
R3806
56
1/16W
:RN-CP
IC3411
TC7W04FU
C3460
47p
CH:1608
C3489
0.1
25V
F:1608
R3812
100 1/16W :CHIP
R3813
100
1/16W
:CHIP
C3462
0.1
25V
F:1608
CR0
CR1
CR2
CR3
5V
L3416
10uH
:CHIP
IC3412
TC7W08FU
VDO VS
VD3
HD3
MID YS
MID VS
MID SYNC
DRC SEL2


IC3089
M24C04-MN6T(A)
NVM
AA
WP
CLK
DAT
Q3091
DTC144EKA
NV-RST
IIC1
CLK1
DAT1
Q3090
2SA1037AK
Q3089
2SA1037AK
D3089
1PS226
D3090
1PS226
2SC2412K
TH-CR
L3089
0μH
BK2125HS601
3.3V
3.3V-2
5V
L3410
1.0μH
:CHIP
C3468
100
6.3V
:AL-CP
C3469
0.1
25V
F:1608
C3465
0.1
25V
F:1608
C3466
0.1
25V
F:1608
C3463
0.1
25V
F:1608
C3464
0.1
25V
F:1608
C3467
0.1
25V
F:1608
C3089
0.01
25V
B:1608
R3037
100
1/16W
:CHIP
R3917
10
1/16W
:RN-CP
R3040
560
1/16W
:RN-CP
R3096
470
1/16W
:CHIP
R3098
47
1/16W
:CHIP
R3099
47
1/16W
:CHIP
R3091
2.2k
1/16W
:CHIP
R3092
2.2k
1/16W
:CHIP
R3095
100k
1/16W
:CHIP
R3097
100k
1/16W
:CHIP
R3001
10k
1/16W
:CHIP
R3933
0
:1608
R3937
100
1/16W
:CHIP
R3100
100
1/16W
:CHIP
R3101
100
1/16W
:CHIP
DRC-FILM
PXI
LINE-W
DRC-INSEL
DRC-PXI
DRC-LINE-W
DRC-LEVEL
DRC-BLK
DRC-PXN
DRC-FFSW
O_DRC_CD_SEL
DRC SEL
DRC SEL1
DRC SEL2
R3050
100
1/16W
:CHIP
R3079
1k
1/16W
:CHIP
C2 D2 C1 C0 D1 D0 VDD
WITH TUNER/WITHOUT
OSA/JAPAN
TV/STB
DRC/DTV
R3089
0
:1608
C3090
47
16V
:AL-CP
L3102
5.9nH
:CHIP
C3101
68p
CH:1608
C3102
68p
CH:1608
R3103
1.2k
1/16W
:CHIP
R3002
0
:1608
R3109
1.5k
1/16W
:CHIP
SUB G
SUB YS
MID SYNC
S-HD
S-VD
R3110
100
1/16W
:CHIP
R3111
100
1/16W
:CHIP
OSD-YS
OSD-HSYNC
OSD-VSYNC
R3106
560
1/16W
:CHIP
R3102
100
1/16W
:CHIP
IC3090
MB94918RPF-G-134
-BND
MID-UCOM
R3023
10k
1/16W
:CHIP
R3021
100
1/16W
:CHIP
C3035
0.01
25V
B:1608
B-INT
VP-MAIN
SUB-BUSY
R3104
100
1/16W
:CHIP
R3022
100
1/16W
:CHIP
VP
MID BINT
MID BUSY
SUBADPLL-LOCK
DSPPLL-LOCK
NVM-RST
NVM-WP
GND X1 X2 VDD RST
R3105
100
1/16W
:CHIP
R3107
0
:1608
X3089 20MHz
C3096
0.01
25V
B:1608
IC3091
PST9145NL
RESET
VCC
RST
R3108
470
1/16W
:CHIP
D3403
UDZS-6.8B
MID MICRO
MID_RST
R3846
22
1/16W
:CHIP
R3847
22
1/16W
:CHIP
XORCVS
XORCHS
DRC
DRCDCLK
AUXCIN1
AUXCIN0
DTVCIN4
DTVCIN3
DTVCIN2
DTVCIN1
DTVCIN0
DTVHSYNC
DTVPBLD
DTVVCLVL
DTVCLAMP
DTVPBLHLD
VDD1
VSS
DCRCVS
DCRCHS
DRCCEIN7
DRCCEIN6
DRCCEIN5
DRCCEIN4
DRCCEIN3
DRCCEIN2
DRCCEIN1
DRCCEIN0
DRCCYIN7
DRCCYIN6
DRCCYIN5
DRCCYIN4
DRCCYIN3
DRCCYIN2
DRCCYIN1
DRCCYIN0
DRCCLK
WSS1
DSYPY7
DSYPY6
DSYPY5
DSYPY4
DSYPY3
DSYPY2
DSYPY1
DSYPY0
DSYPCB7
DSYPCB6
CB7 CB6 CB5 CB4 CB3 CB2 CB1 CB0
CR7 CR6 CR5 CR4 CR3 CR2 CR1 CR0
Y7 Y6 Y5 Y4 Y3 Y2 Y1 Y0
RB3412 47*4
RB3411 47*4
RB3410 47*4
RB3409 47*4
RB3408 47*4
RB3407 47*4
RB3401 33*4
RB3402 33*4
RB3403 33*4
RB3404 33*4
RB3405 33*4
RB3406 33*4
IC3410
CXD2309Q
D/A
G1 G0 R9 R8 R7 R6 R5 R4 R3 R2 R1 R0
B5 B6 B7 B8 B9 RCK GCK BCK D-VSS VB IREF
D-VDD
A-VSS
BO
GO
RO
VG
VREF
R3863
2.2k
1/16W
:RN-CP
R3858
3.3k
1/16W
:RN-CP
R3864
3.3k
1/16W
:CHIP
C3485
0.1
25V
F:1608
C3486
0.1
25V
F:1608
C3487
0.1
25V
F:1608
C3488
10
16V
:AL-CP



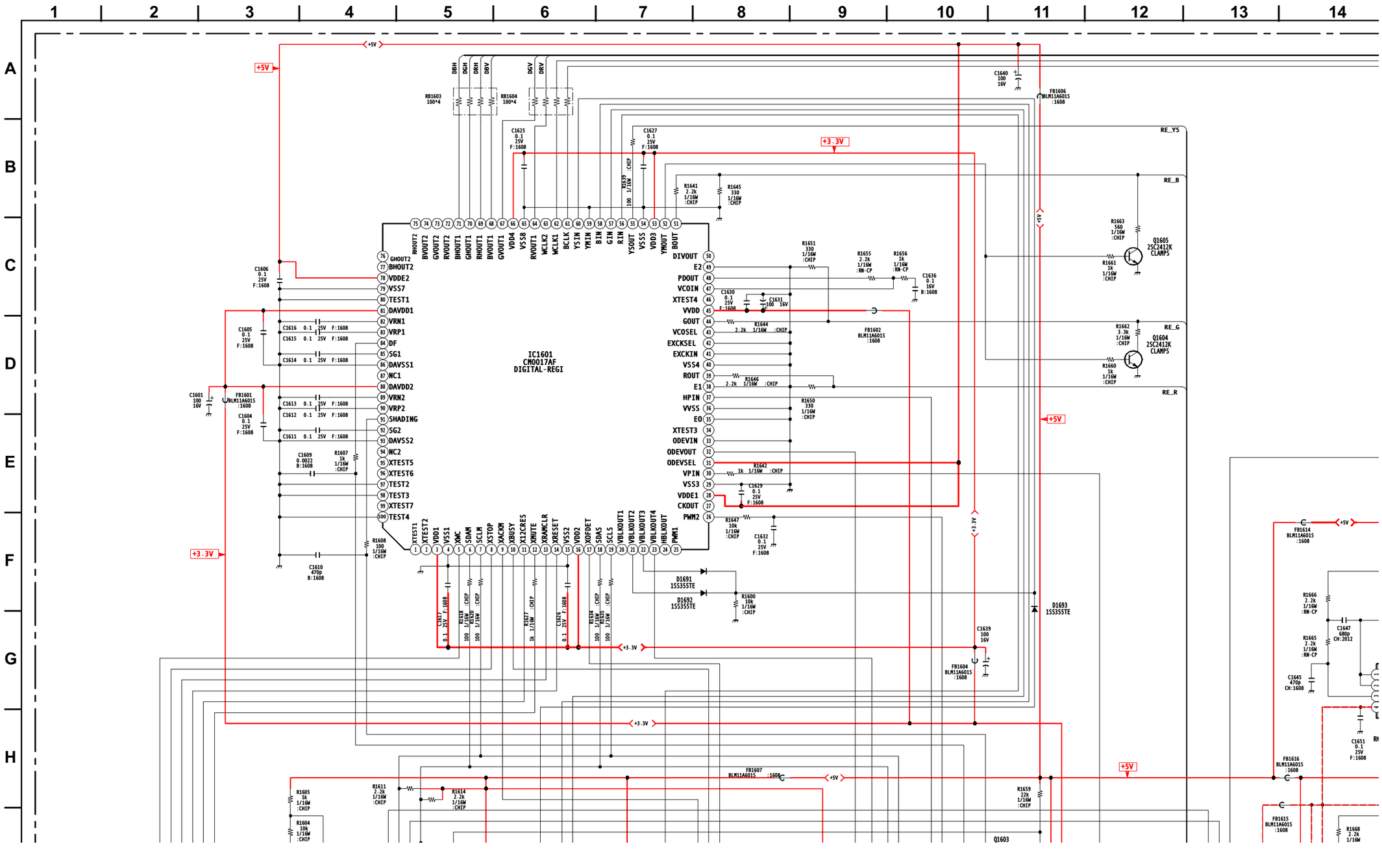
B (2/2)

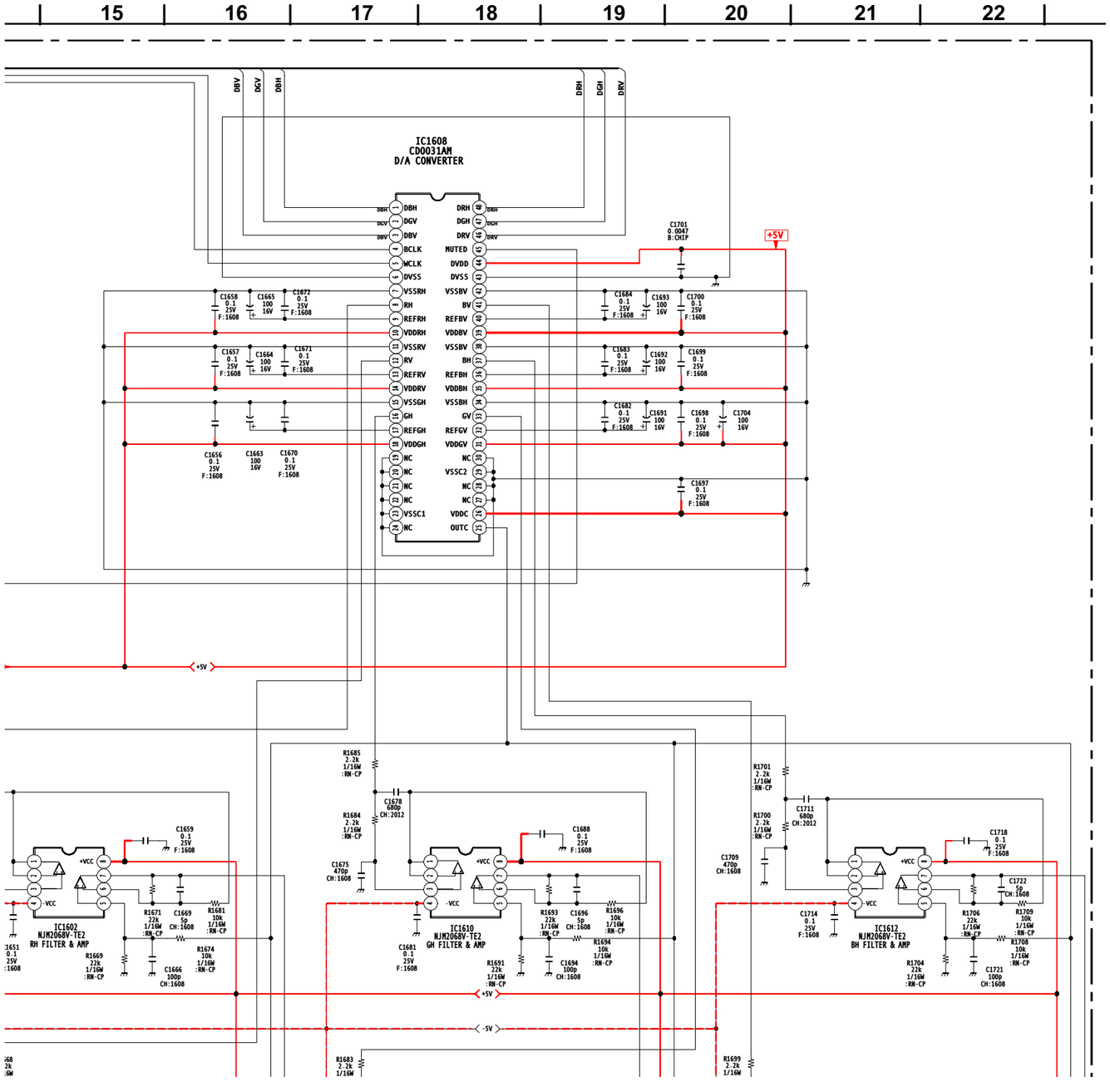
9-965-935-01<RA6>B P2

AD BOARD SCHEMATIC DIAGRAM

The AD board is not field repairable. If service is required, use the following part number to order a complete replacement board.

A-1299-523-A AD Board, Complete

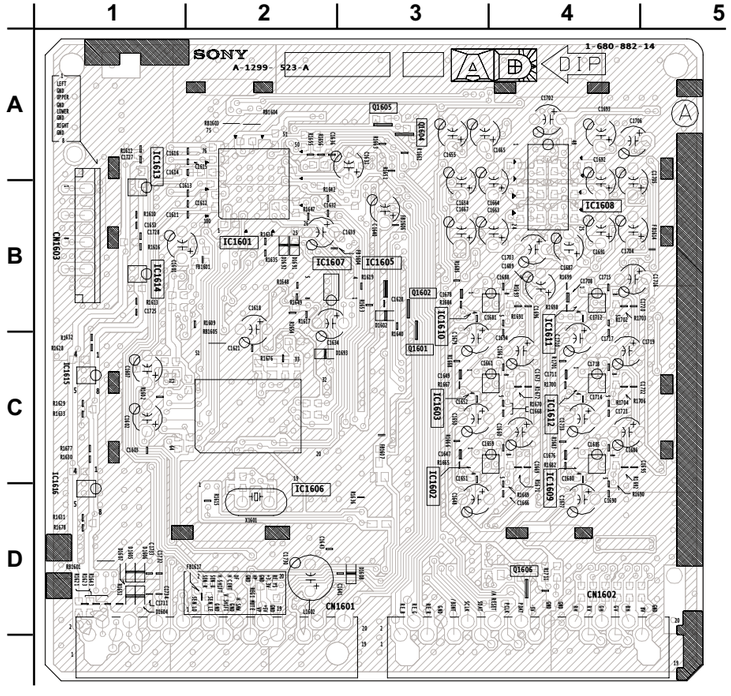


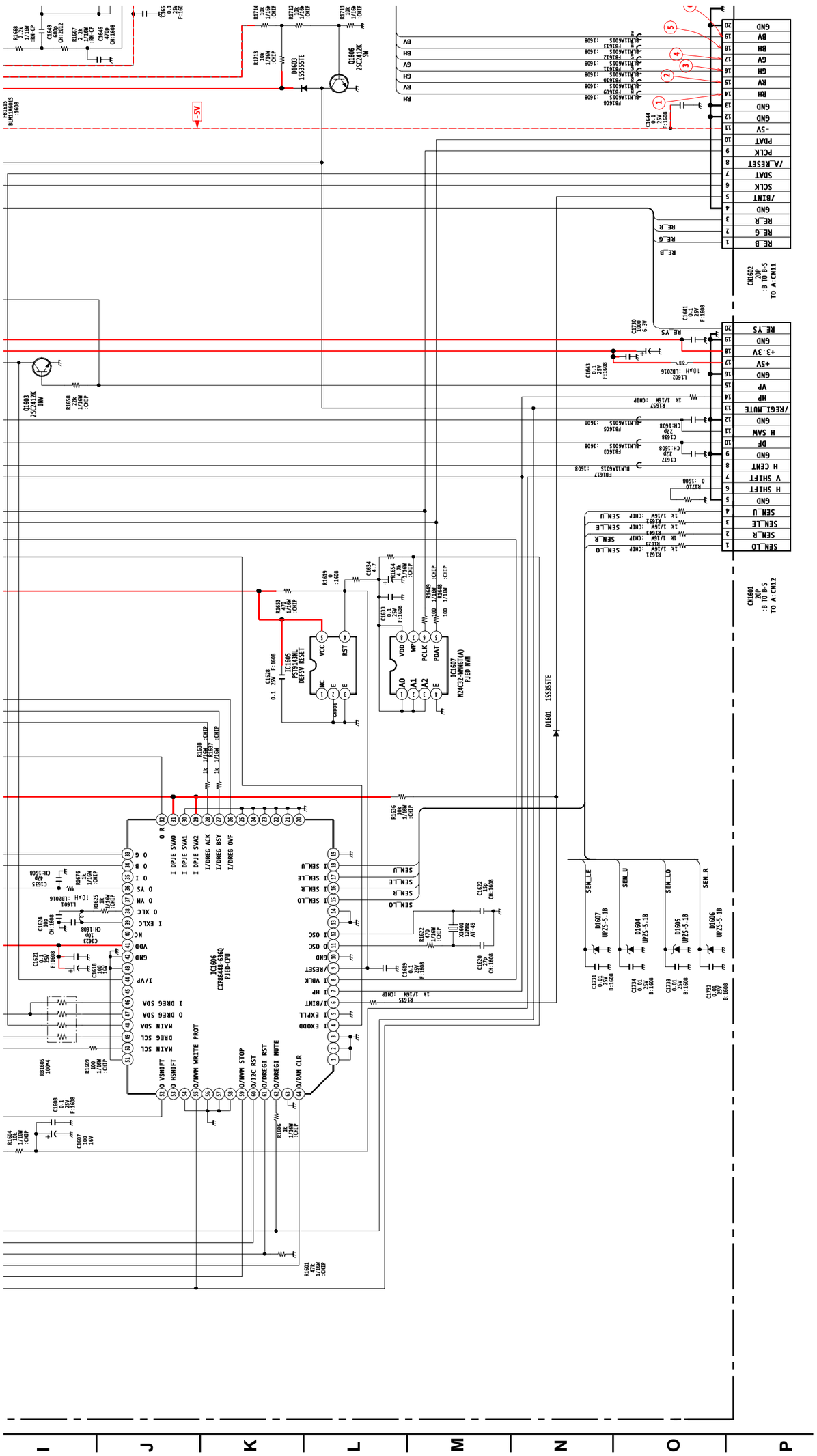


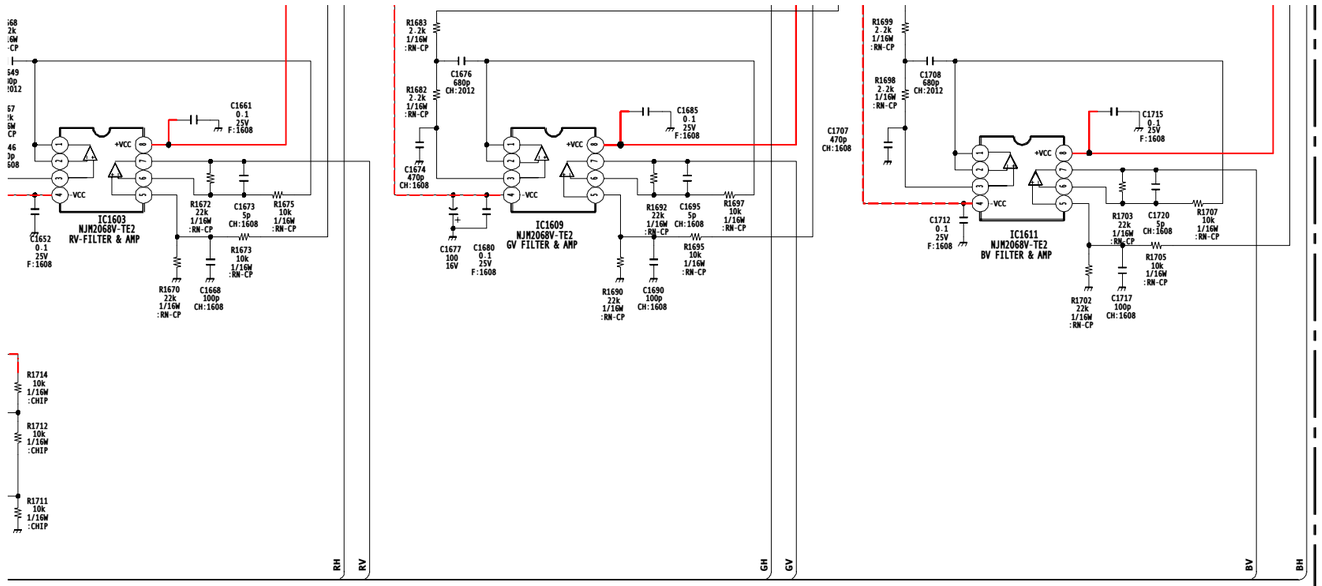
AD BOARD WAVEFORMS

1 2.1 Vp-p (V)	2 2.3 Vp-p (V)	3 2.1 Vp-p (V)
4 2.5 Vp-p (V)	5 2.0 Vp-p (V)	6 2.3 Vp-p (V)

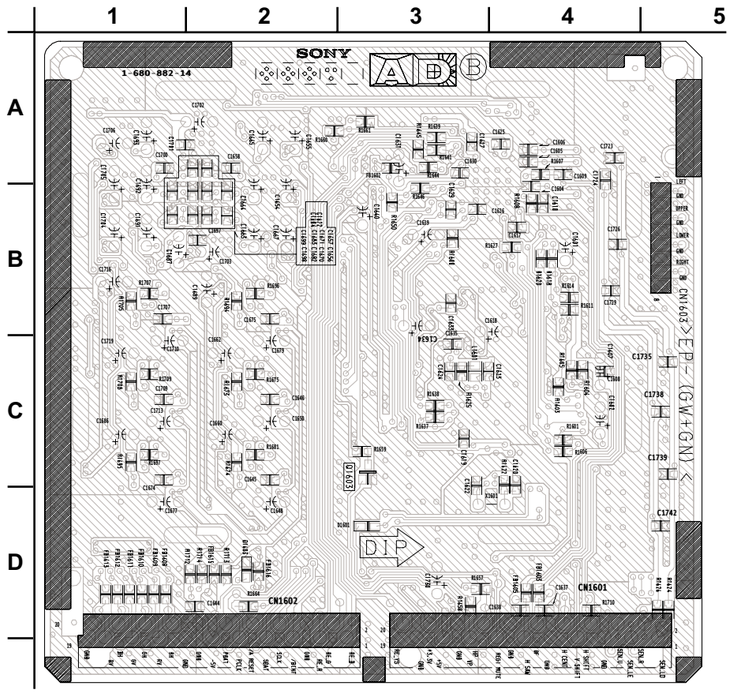
AD [DIGITAL REGI, PJED CPU, PJE DRIVE] [COMPONENT SIDE]




CNH602
20P
:B TO B
TO A:CN612
CNH601
40P
:B TO B
TO A:CN612
GND
BV
BH
GV
GH
RV
RH
GND
GND
-5V
PDAT
PCLK
/A_RESET
SDAT
SCLK
/BINT
GND
RE_R
RE_G
RE_B
RE_VS
GND
+3.3V
+5V
GND
VP
HP
/REGL_MUTE
GND
H SAW
DF
GND
H CENT
V SHIFT
H SHIFT
GND
SEN_U
SEN_LE
SEN_R
SEN_LO
-5V
D1601 1SS355TE
SEN_LE
SEN_U
SEN_LO
SEN_R
D1607 UPZ5.1B
D1604 UPZ5.1B
D1605 UPZ5.1B
D1606 UPZ5.1B
IC1606
CXP86448-036Q
PJ1ED-CPU
IC1605
PST3143NR
DEFSV RESET
IC1607
M24C32-WMN6T(A)
PJ1ED NVM
I/VP
I DREG SDA
O DREG SDA
MAIN SDA
DREG SCL
MAIN SCL
O VSHIFT
O HSHIFT
O/NVM WRITE PROT
O/NVM STOP
O/I2C RST
O/DREG1 RST
O/DREG1 MUTE
O/NVM CLR
I SEN_U
I SEN_LE
I SEN_R
I SEN_LO
I OSC
O OSC
GND
I/RESET
I VBLK
I HP
I/BINT
I EXPLL
I EXDDD
O R
I DPJE SWA0
I DPJE SWA1
I DPJE SWA2
I/DREG ACK
I/DREG BSY
I/DREG OVF
O G
O B
O I
O VS
O VM
O XLC
I EXLC
MC
VDD
GND
-5V
RE_B
RE_G
RE_R
RE_VS
+3.3V
+5V
/BINT
/REGL_MUTE
H SAW
H CENT
H SHIFT
V SHIFT
SEN_U
SEN_LE
SEN_R
SEN_LO
D1603 1SS355TE
Q1605 2SC4213K
D1601 1SS355TE
D1603 1SS355TE
D1603 2SC4213K
IC1605 PST3143NR DEFSV RESET
IC1607 M24C32-WMN6T(A) PJ1ED NVM
IC1606 CXP86448-036Q PJ1ED-CPU

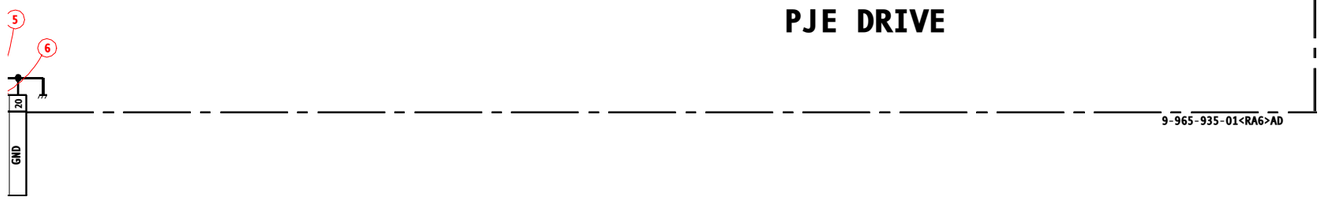


[CONDUCTOR SIDE]

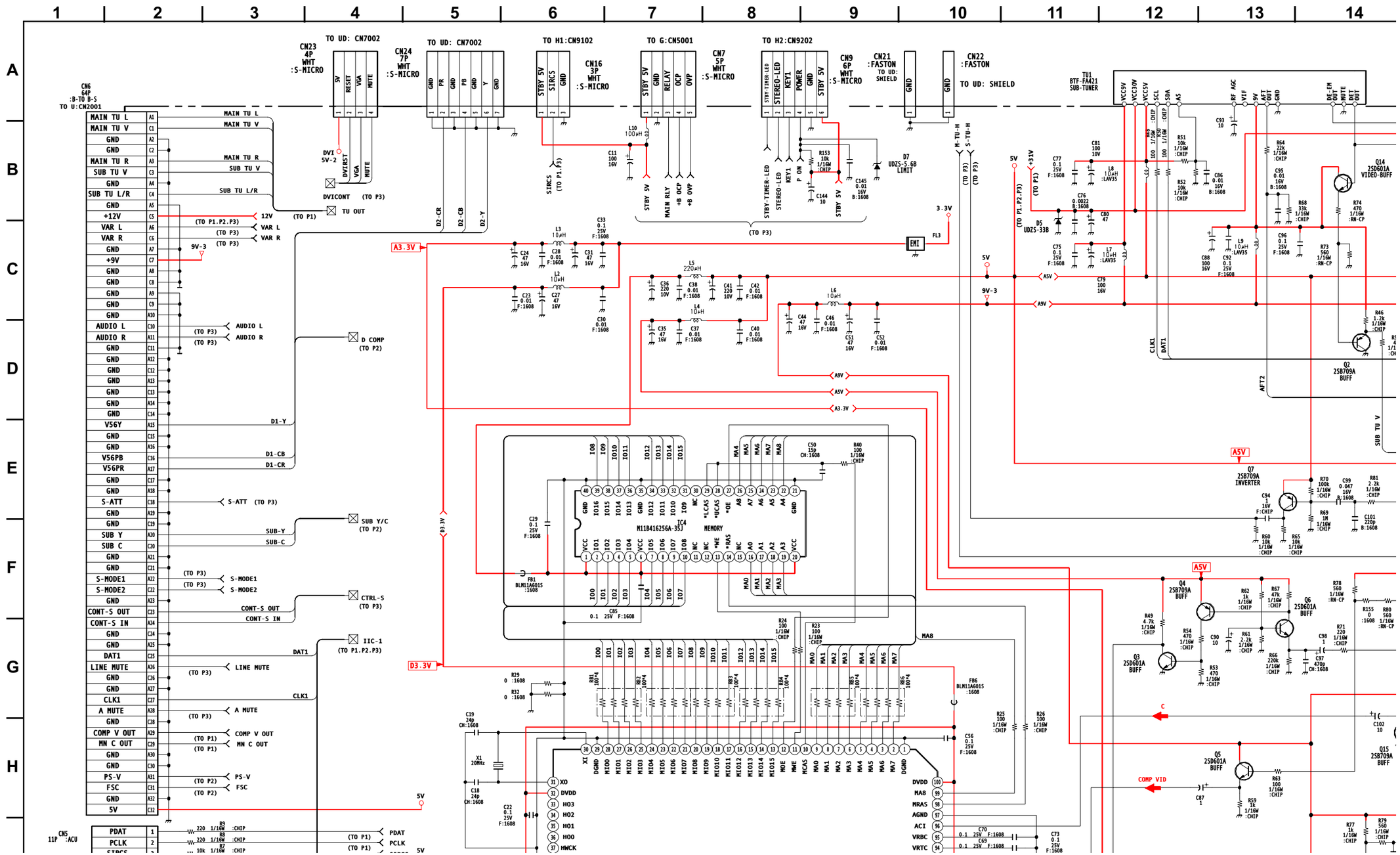


AD

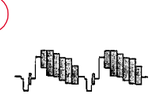
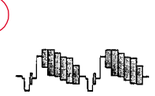
DIGITAL REGI
PJED CPU
PJE DRIVE

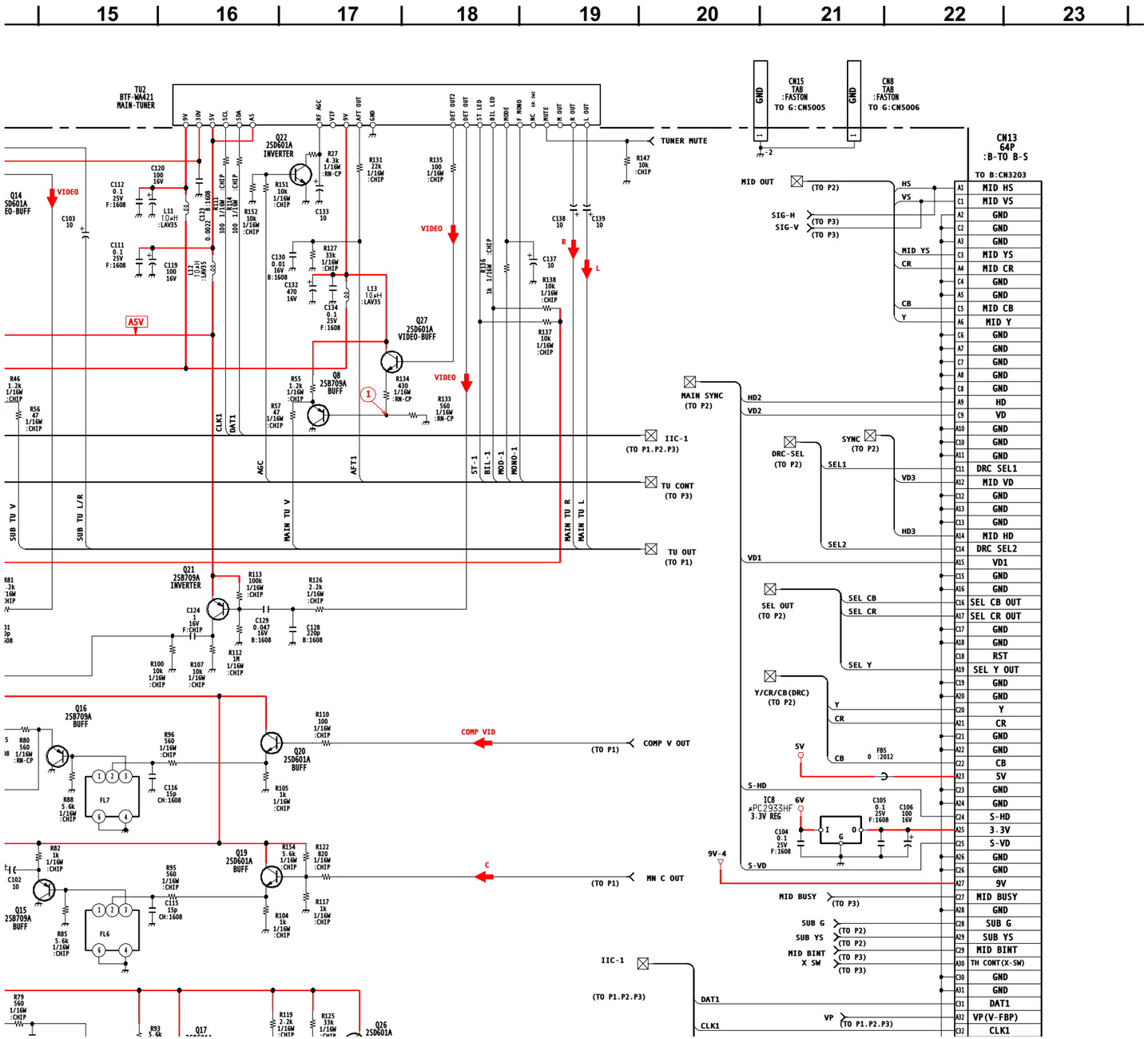


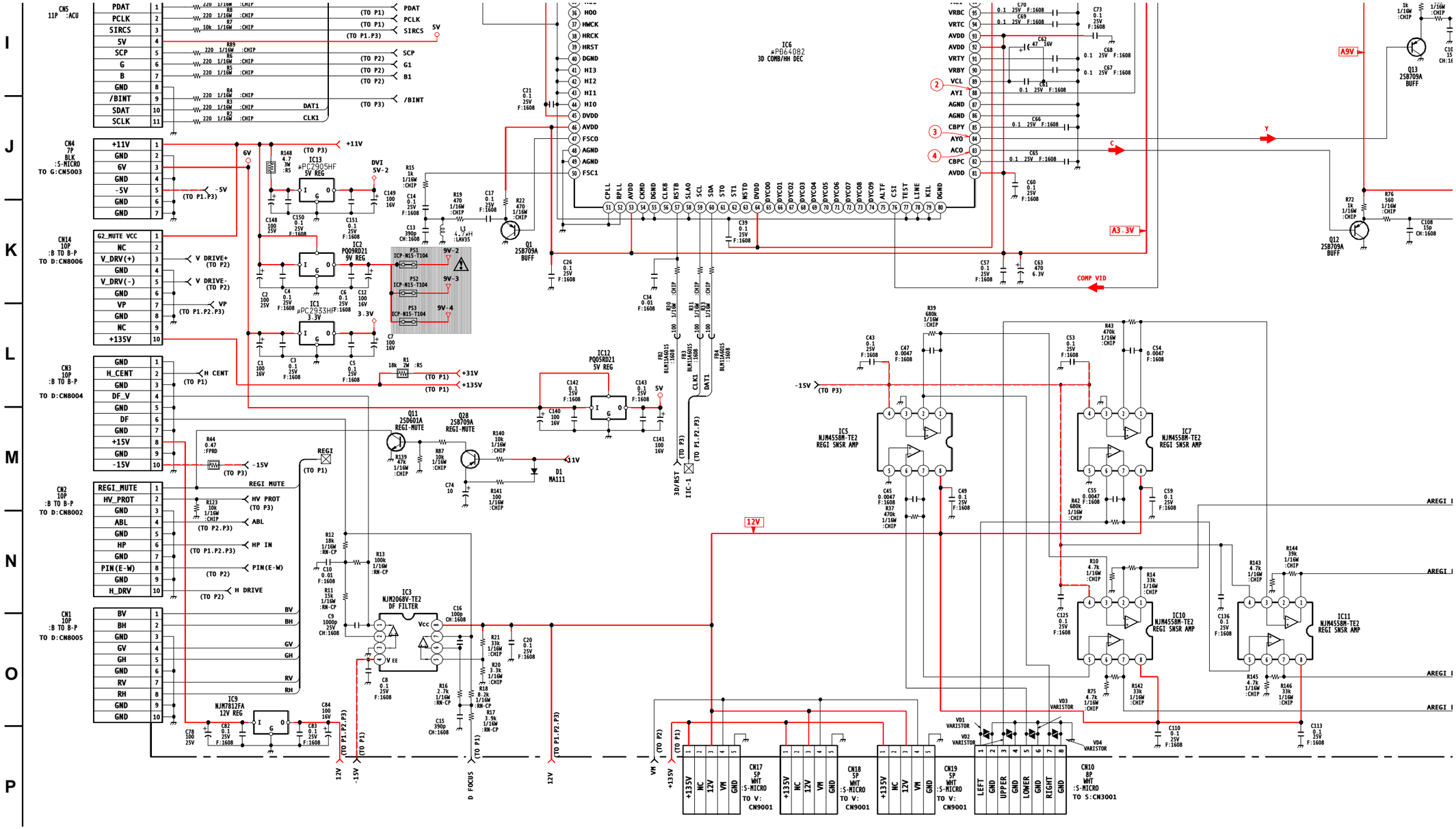
A BOARD SCHEMATIC DIAGRAM (1 OF 3)

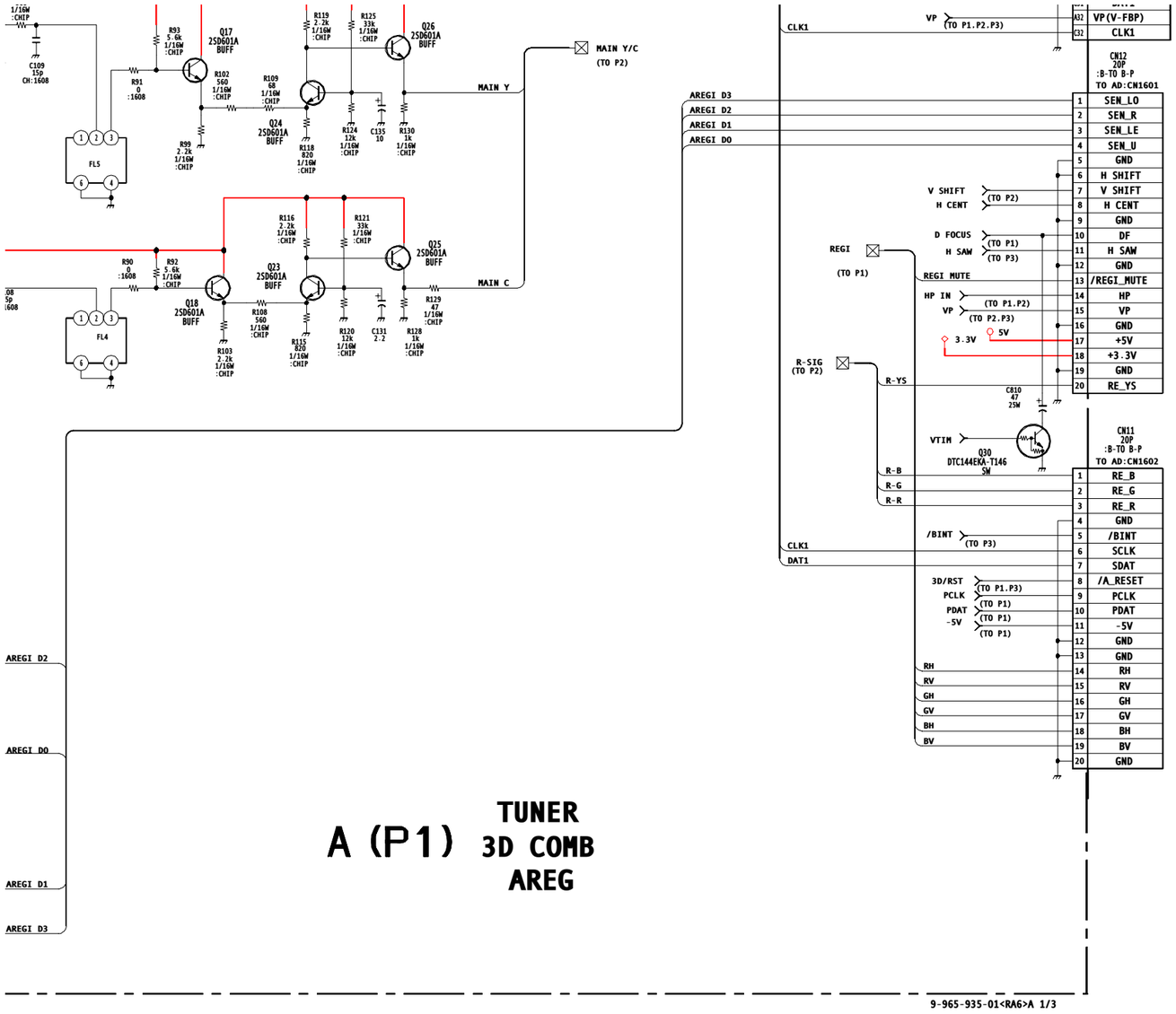


A BOARD WAVEFORMS

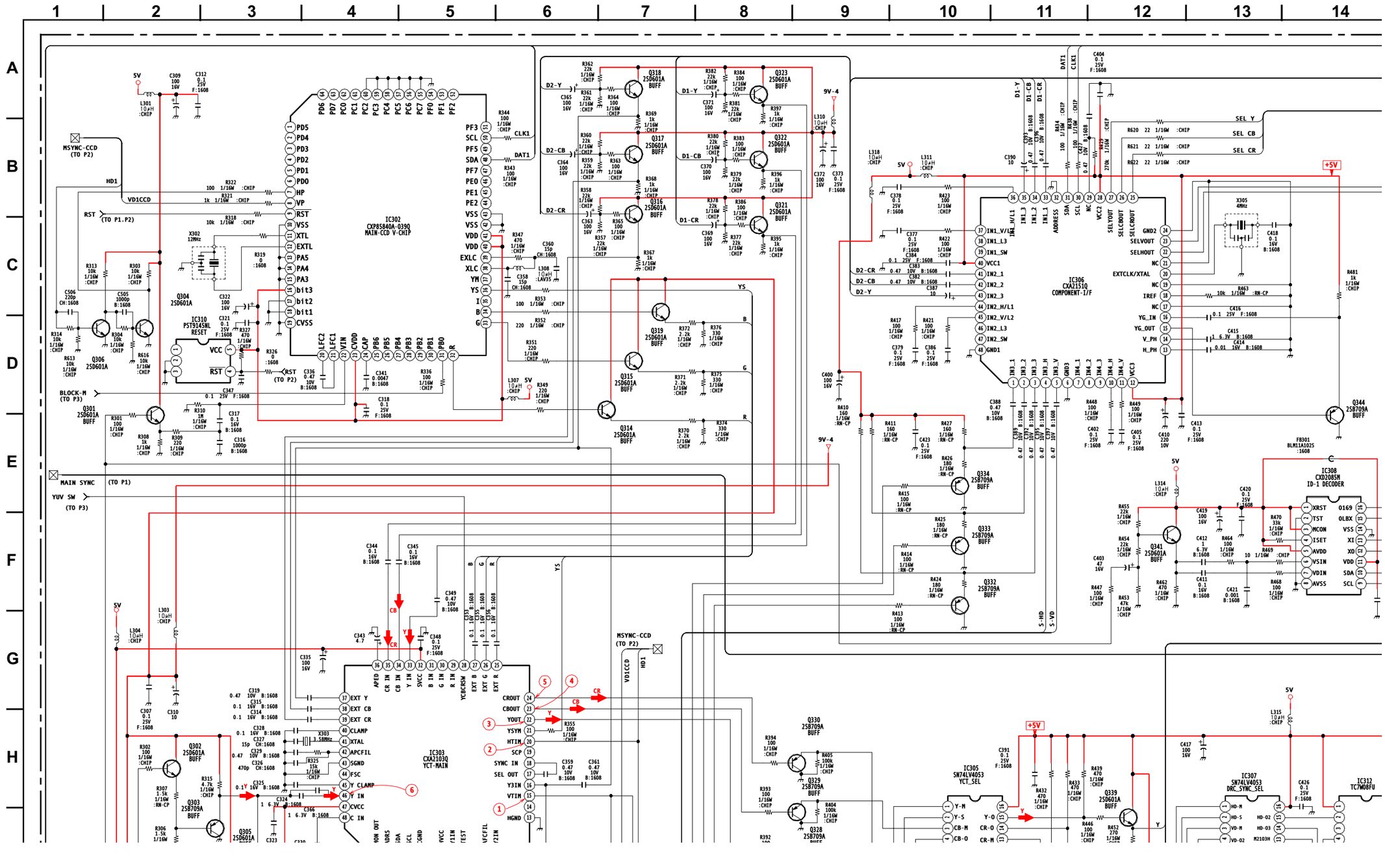
1  2.1Vp-p (H)	2  2.1Vp-p (H)
3 3Vp-p (H)	4 2Vp-p (H)

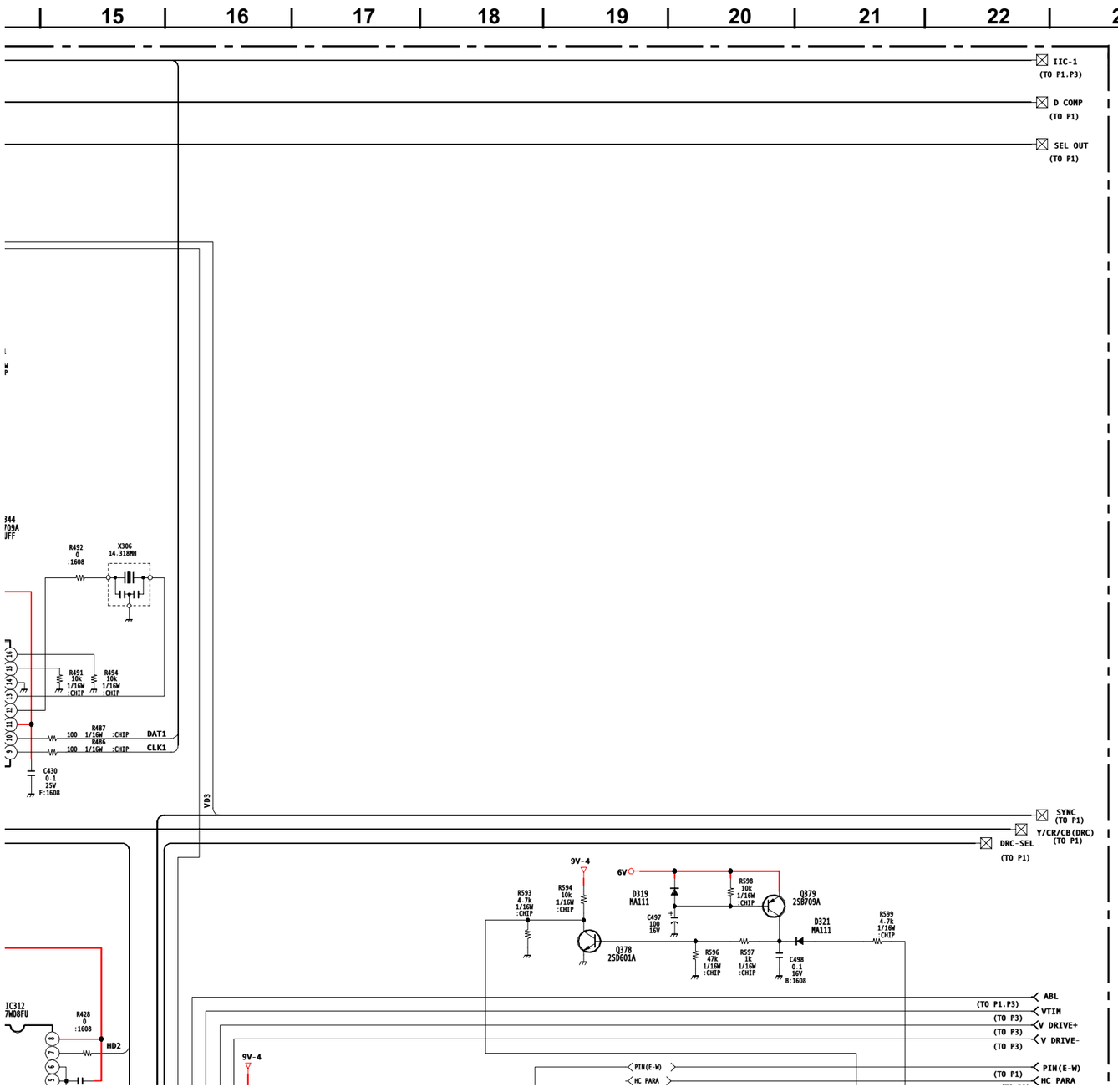



CN5 11P :ACU
PDAT
PCLK
SIRCS
5V
SCP
G
B
GND
/BINT
SDAT
SCLK
CN4 7P BLK :S-MICRO TO G:CN5003
+11V
GND
6V
GND
-5V
GND
GND
CN14 10P :B TO B-P TO D:CN8006
G2_MUTE VCC
NC
V_DRV(+)
GND
V_DRV(-)
GND
VP
GND
NC
+135V
CN3 10P :B TO B-P TO D:CN8004
GND
H_CENT
GND
DF_V
GND
DF
GND
+15V
GND
-15V
CN2 10P :B TO B-P TO D:CN8002
REGI_MUTE
HV_PROT
GND
ABL
GND
HP
GND
PIN(E-W)
GND
H_DRV
CN1 10P :B TO B-P TO D:CN8005
BV
BH
GND
GV
GH
GND
RV
RH
GND
GND
IC6 μPB64082 3D COMB/HH DEC
IC13 μPC7905HF 5V REG
IC2 PQ09RD21 9V REG
IC1 μPC2933HF 3.3V
IC12 PQ05RD21 5V REG
IC9 NJM7812FA 12V REG
IC3 NJM2068V-TE2 DF FILTER
IC5 NJM4558M-TE2 REGI SNSR AMP
IC7 NJM4558M-TE2 REGI SNSR AMP
IC10 NJM4558M-TE2 REGI SNSR AMP
IC11 NJM4558M-TE2 REGI SNSR AMP
Q1 2SB709A BUFF
Q11 2SD601A REGI-MUTE
Q28 2SB709A REGI-MUTE
Q12 2SB709A BUFF
Q13 2SB709A BUFF
D1 MA111
VD1 VARISTOR
VD2 VARISTOR
VD3 VARISTOR
VD4 VARISTOR
A9V
A3.3V
COMP VID
Y
C
AREGI I
AREGI I
AREGI I
REGI
REGI MUTE
HV PROT
ABL
HP IN
PIN(E-W)
H DRIVE
V DRIVE+
V DRIVE-
VP
H CENT
D FOCUS
3D/HST
IIC-1
CN17 5P WHT :S-MICRO TO V: CN9001
CN18 5P WHT :S-MICRO TO V: CN9001
CN19 5P WHT :S-MICRO TO V: CN9001
CN10 8P WHT :S-MICRO TO S:CN3001

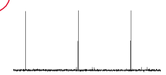
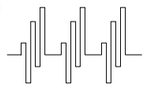
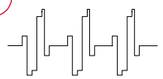
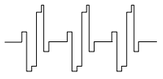
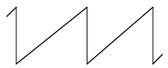

MAIN Y/C
(TO P2)
MAIN Y
MAIN C
FL5
FL4
Q17 2SD601A BUFF
Q26 2SD601A BUFF
Q24 2SD601A BUFF
Q25 2SD601A BUFF
Q23 2SD601A BUFF
Q18 2SD601A BUFF
C109 15p CH:1608
C135 10
C131 2.2
C810 47 25W
AREGI D3
AREGI D2
AREGI D1
AREGI D0
CLK1
DAT1
VP (TO P1.P2.P3)
V SHIFT
H CENT
(TO P2)
D FOCUS
H SAW
(TO P1)
(TO P3)
REGI
(TO P1)
REGI MUTE
HP IN
VP
(TO P1.P2)
(TO P2.P3)
3.3V
5V
R-SIG
(TO P2)
R-YS
VTIM
Q30 DTC144EKA-T146 SW
R-B
R-G
R-R
/BINT
(TO P3)
3D/RST
PCLK
PDAT
-5V
(TO P1.P3)
(TO P1)
(TO P1)
(TO P1)
RH
RV
GH
GV
BH
BV
CN12 20P :B-TO B-P TO AD:CN1601
1 SEN_LO
2 SEN_R
3 SEN_LE
4 SEN_U
5 GND
6 H SHIFT
7 V SHIFT
8 H CENT
9 GND
10 DF
11 H SAW
12 GND
13 /REGI_MUTE
14 HP
15 VP
16 GND
17 +5V
18 +3.3V
19 GND
20 RE_YS
CN11 20P :B-TO B-P TO AD:CN1602
1 RE_B
2 RE_G
3 RE_R
4 GND
5 /BINT
6 SCLK
7 SDAT
8 /A_RESET
9 PCLK
10 PDAT
11 -5V
12 GND
13 GND
14 RH
15 RV
16 GH
17 GV
18 BH
19 BV
20 GND
AREGI D2
AREGI D0
AREGI D1
AREGI D3
A (P1) TUNER 3D COMB AREG
9-965-935-01<RA6>A 1/3

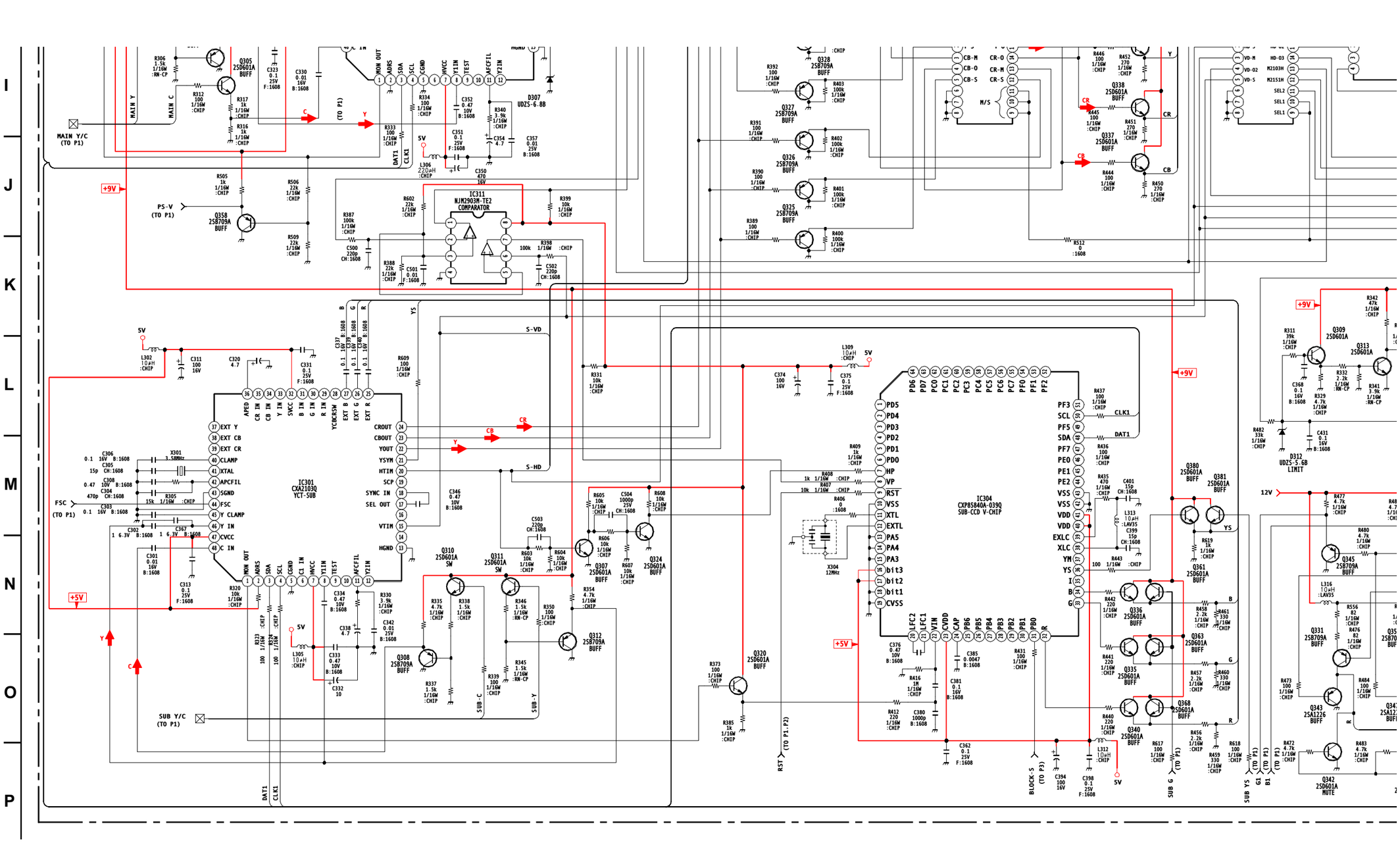
A BOARD SCHEMATIC DIAGRAM (2 OF 3)





A BOARD WAVEFORMS

1  3.5 Vp-p (V)	2 3.7 Vp-p (H)	3 1.5 Vp-p (H)
4  1.2 Vp-p (H)	5  1.3 Vp-p	6 1.2 Vp-p (H)
7 1.2 Vp-p (H)	8 0.6 Vp-p	9  0.7 Vp-p (M)
10 3.8 Vp-p (H)	11  1.4 Vp-p (V)	12 1.4 Vp-p (V)
13 3.3 Vp-p (H)	14 3.5 Vp-p (H)	15 2.3 Vp-p (H)


IC311
NJM2903M-TE2
COMPARATOR
IC301
CXA2103Q
YCT-SUB
IC304
CXP85840A-039Q
SUB-CCD V-CHIP
MAIN Y/C
(TO P1)
PS-V
(TO P1)
SUB Y/C
(TO P1)
FSC
(TO P1)
+9V
+5V
5V
12V
S-VD
S-HD
CR
CB
Y
C
SUB-C
SUB-Y
RST
(TO P1.P2)
BLOCK-S
(TO P3)
SUB G
(TO P1)
SUB YS
(TO P1)
G1
(TO P1)
B1
(TO P1)
DAT1
CLK1
Q305 2SD601A BUFF
Q358 2SB709A BUFF
Q327 2SB709A BUFF
Q326 2SB709A BUFF
Q325 2SB709A BUFF
Q328 2SB709A BUFF
Q338 2SD601A BUFF
Q337 2SD601A BUFF
Q308 2SB709A BUFF
Q310 2SD601A SW
Q311 2SD601A SW
Q312 2SB709A BUFF
Q307 2SD601A BUFF
Q324 2SD601A BUFF
Q320 2SD601A BUFF
Q309 2SD601A
Q313 2SD601A
Q380 2SD601A BUFF
Q381 2SD601A BUFF
Q361 2SD601A BUFF
Q336 2SD601A BUFF
Q335 2SD601A BUFF
Q340 2SD601A BUFF
Q368 2SD601A BUFF
Q363 2SD601A BUFF
Q345 2SB709A BUFF
Q331 2SB709A BUFF
Q343 2SA1226 BUFF
Q342 2SD601A MUTE
D307 UDZS-6.8B
D312 UDZS-5.6B LIMIT
X301 3.58MHz
X304 12MHz

A (P2)
CRT DRIVE
YCT

IC309
CX2150AQ
Y/C/CRT DRIVE

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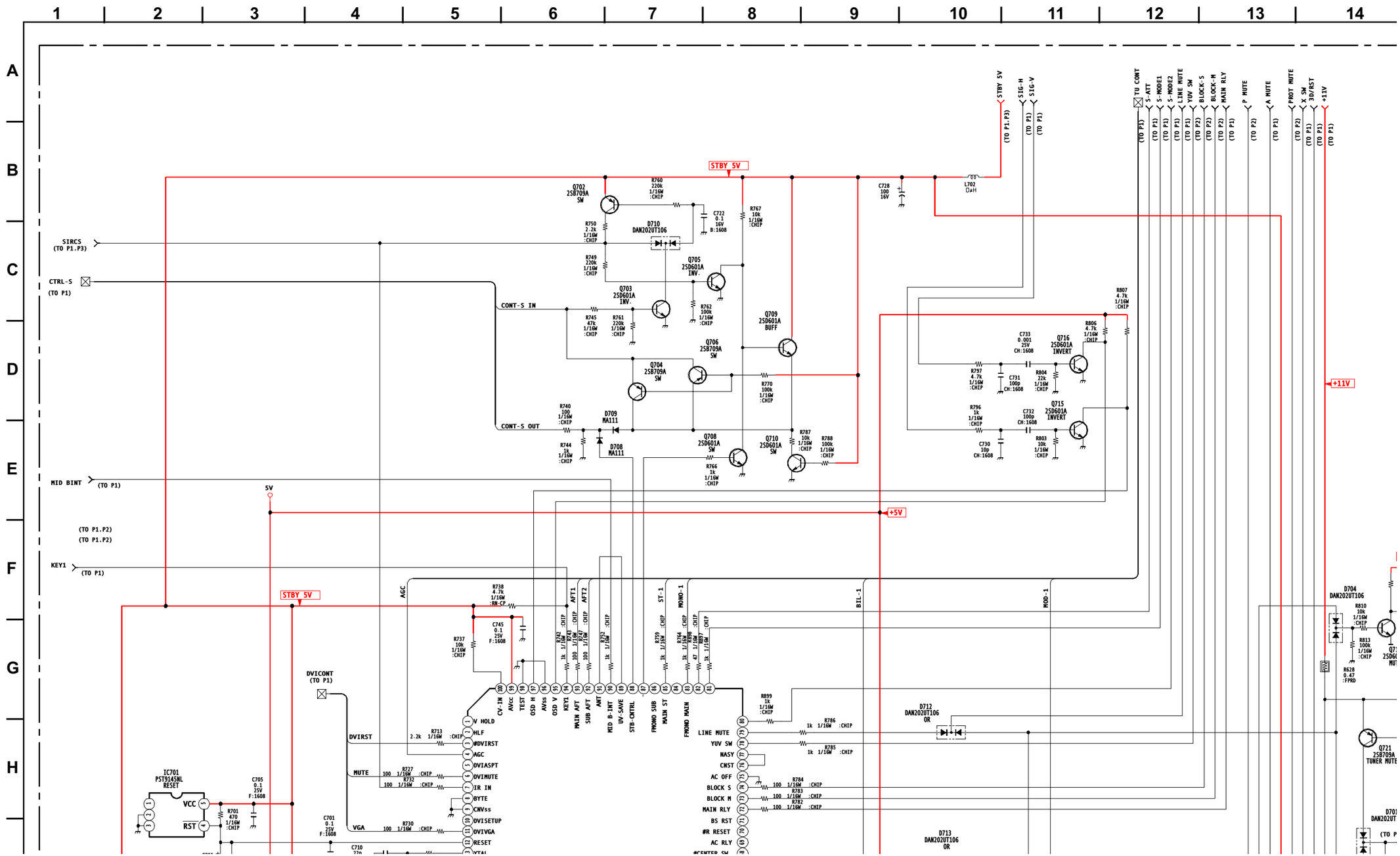
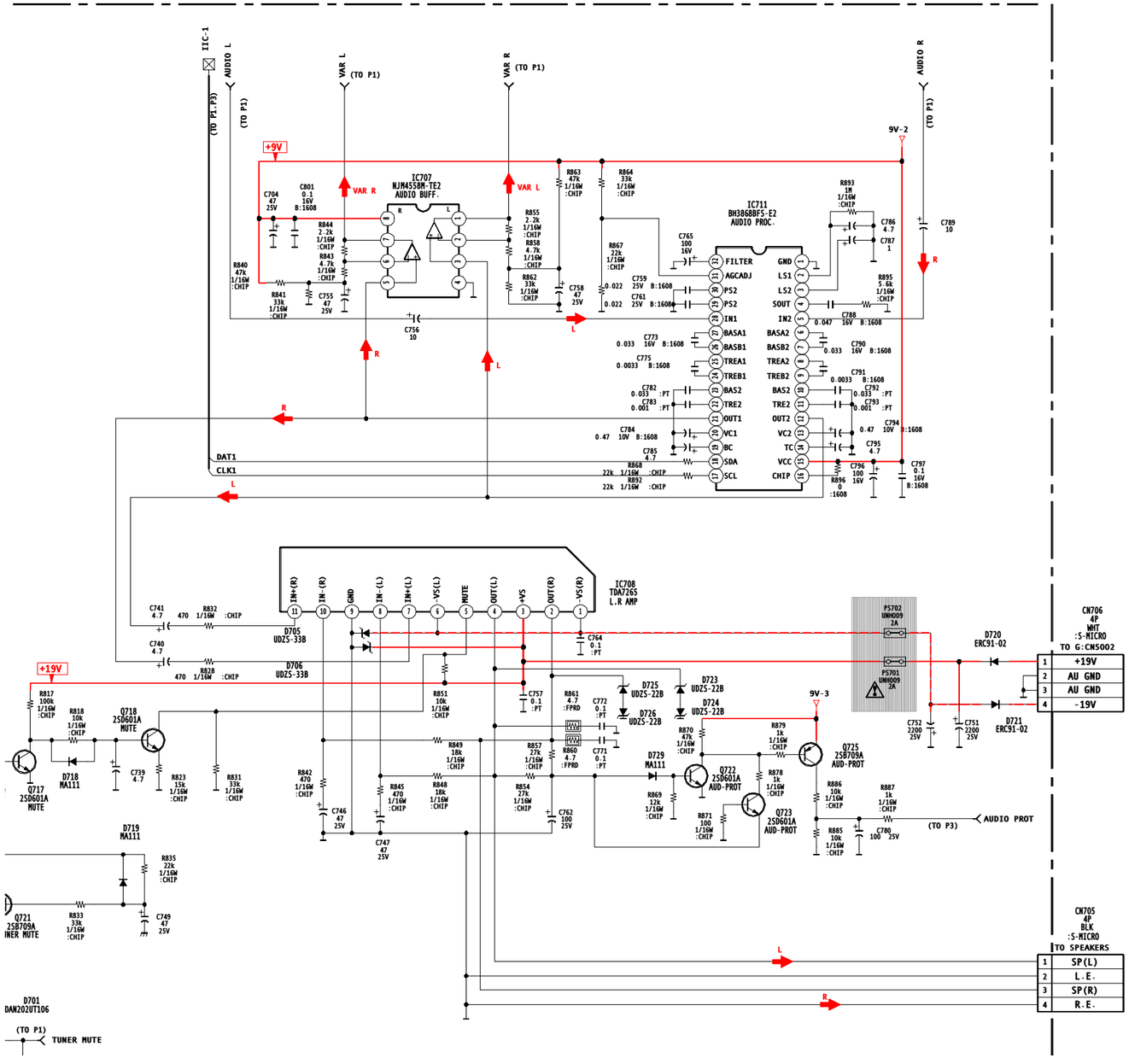
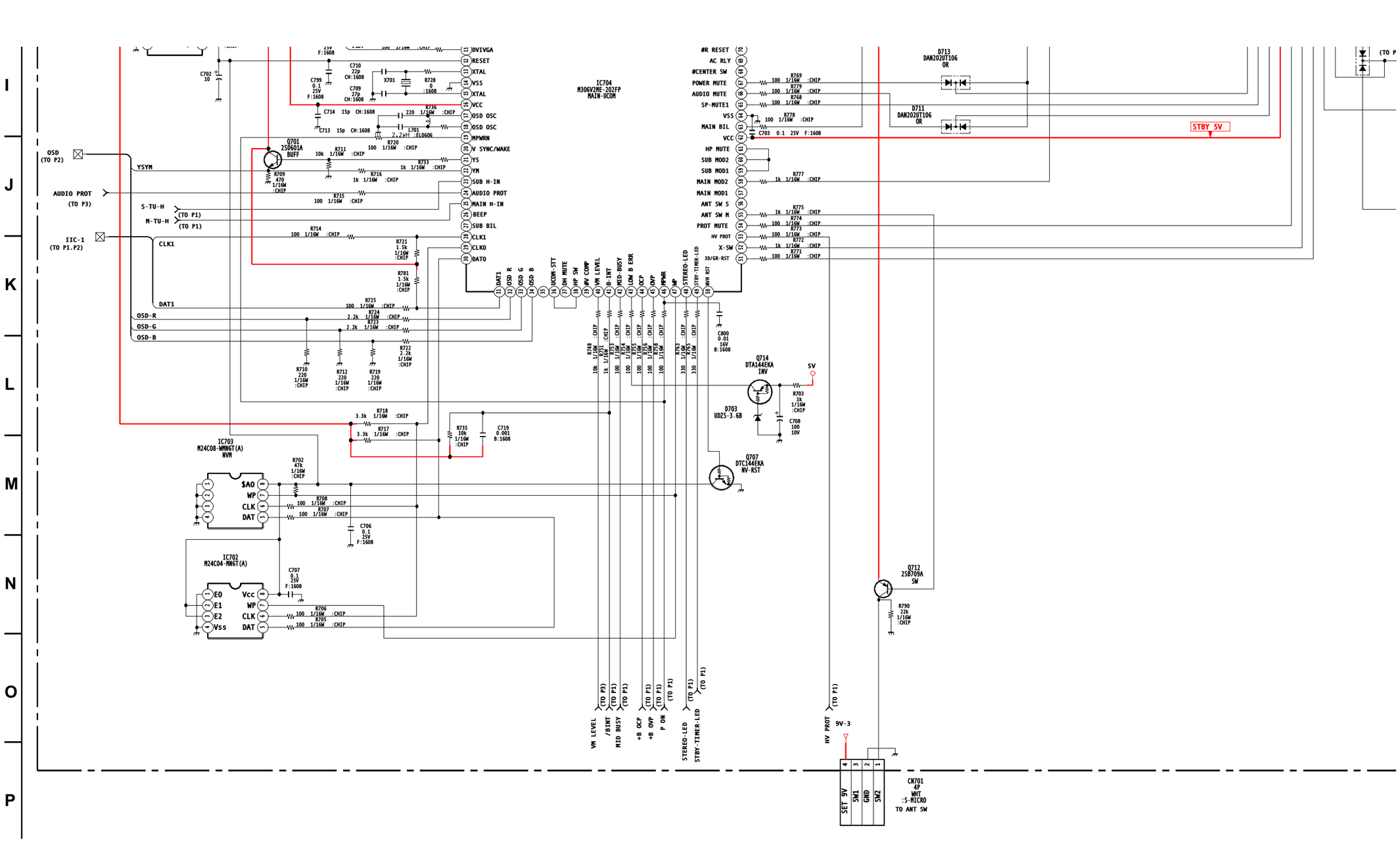
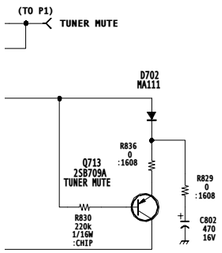
A BOARD SCHEMATIC DIAGRAM (3 OF 3)



15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23



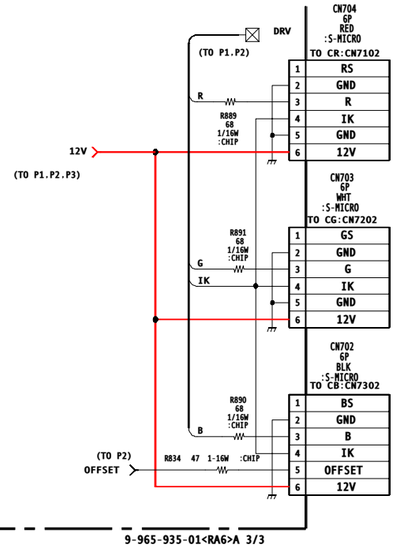

IC704
M306V2ME-202FP
MAIN-UCOM
IC703
M24C08-WMN6T(A)
NVM
IC702
M24C04-RMN6T(A)
Q701
2SD601A
BUFF
Q714
DTA144EKA
INV
Q707
DTC144EKA
NV-RST
Q712
2SB709A
SW
D703
UDZS-3.6B
D713
DAN202UT106
OR
D711
DAN202UT106
OR
STBY 5V
5V
9V-3
OSD (TO P2)
AUDIO PROT (TO P3)
S-TU-H (TO P1)
M-TU-H (TO P1)
IIC-1 (TO P1.P2)
CLK1
DAT1
OSD-R
OSD-G
OSD-B
VM LEVEL (TO P3)
/BINT (TO P1)
MID BUSY (TO P1)
+B OCP (TO P1)
+B OVP (TO P1)
P ON (TO P1)
STEREO-LED (TO P1)
STBY-TIMER-LED (TO P1)
HV PROT (TO P1)
CN701
4P
WHT
:S-MICRO
TO ANT SW
SET 9V
SW1
GND
SW2



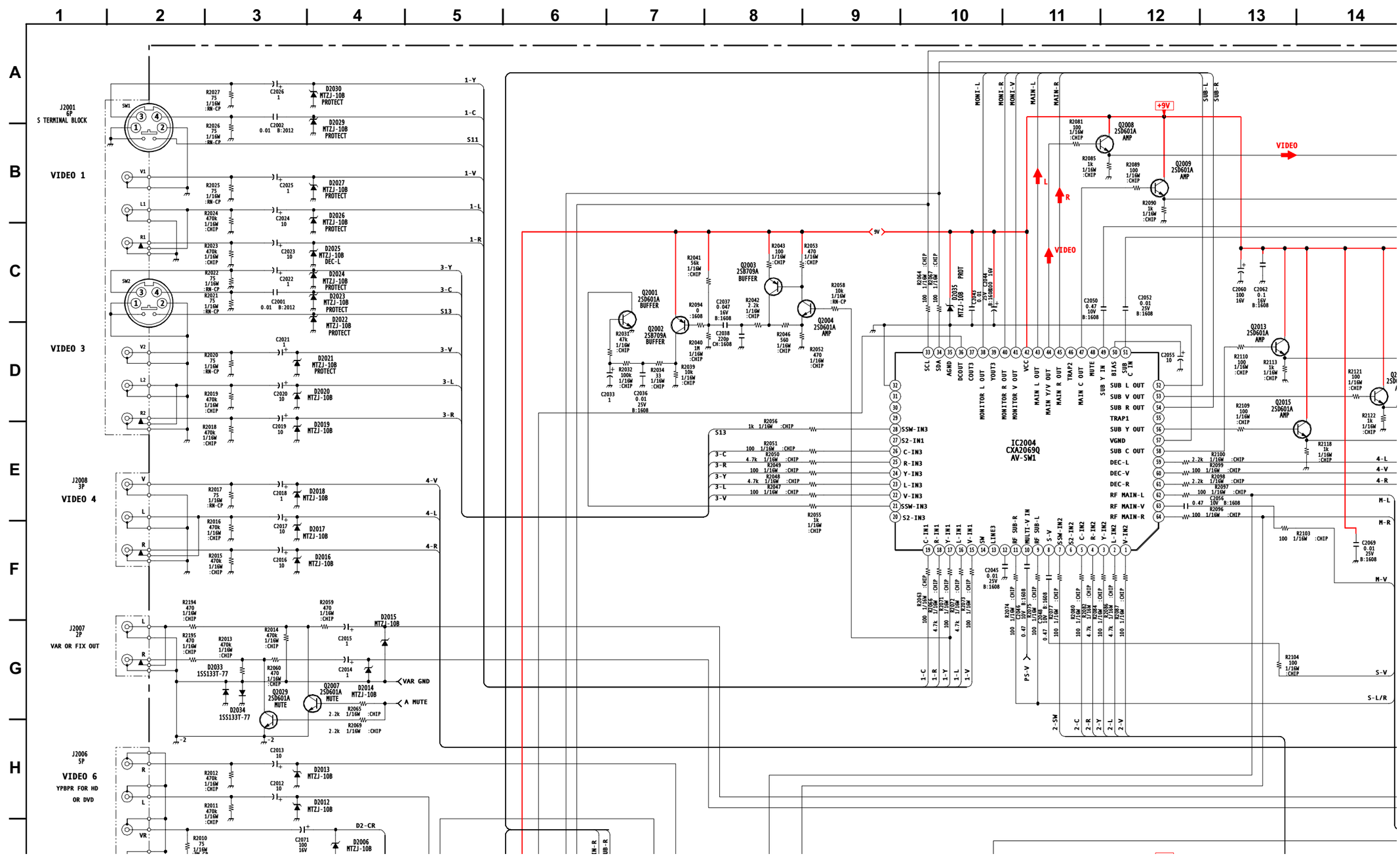
A (P3)

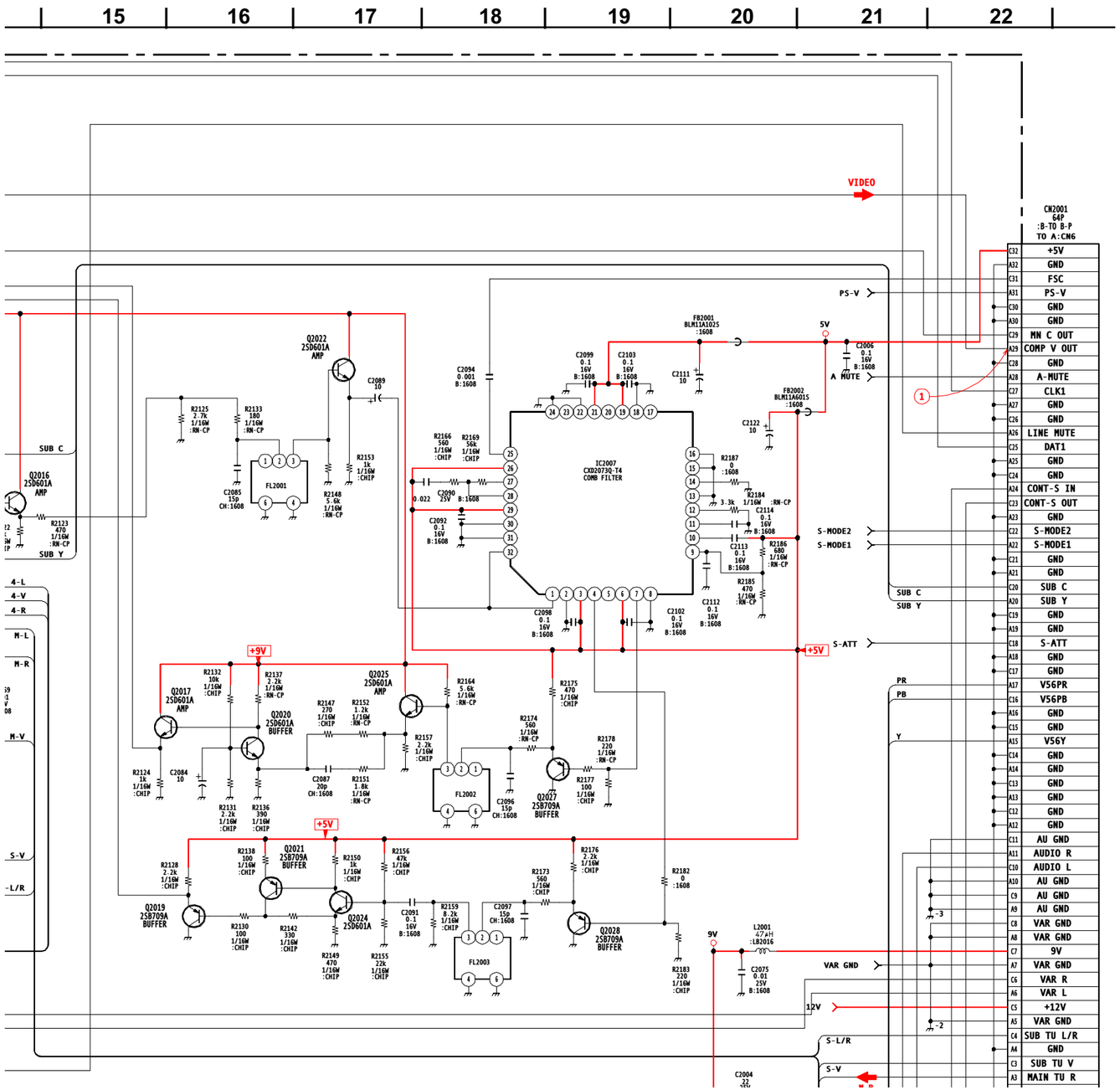
SYSTEM CONTROL

AUDIO OUTPUT



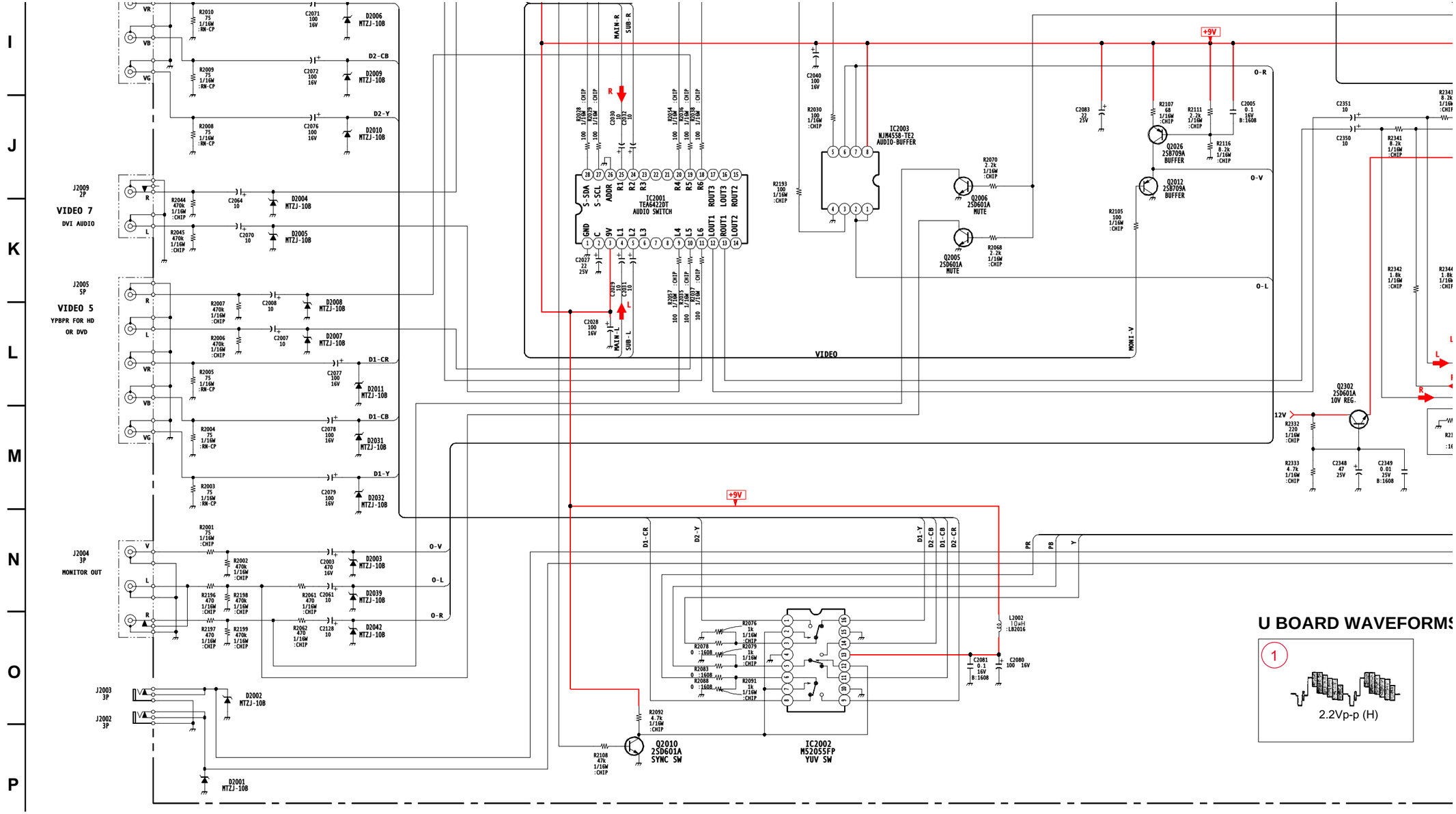
U BOARD SCHEMATIC DIAGRAM

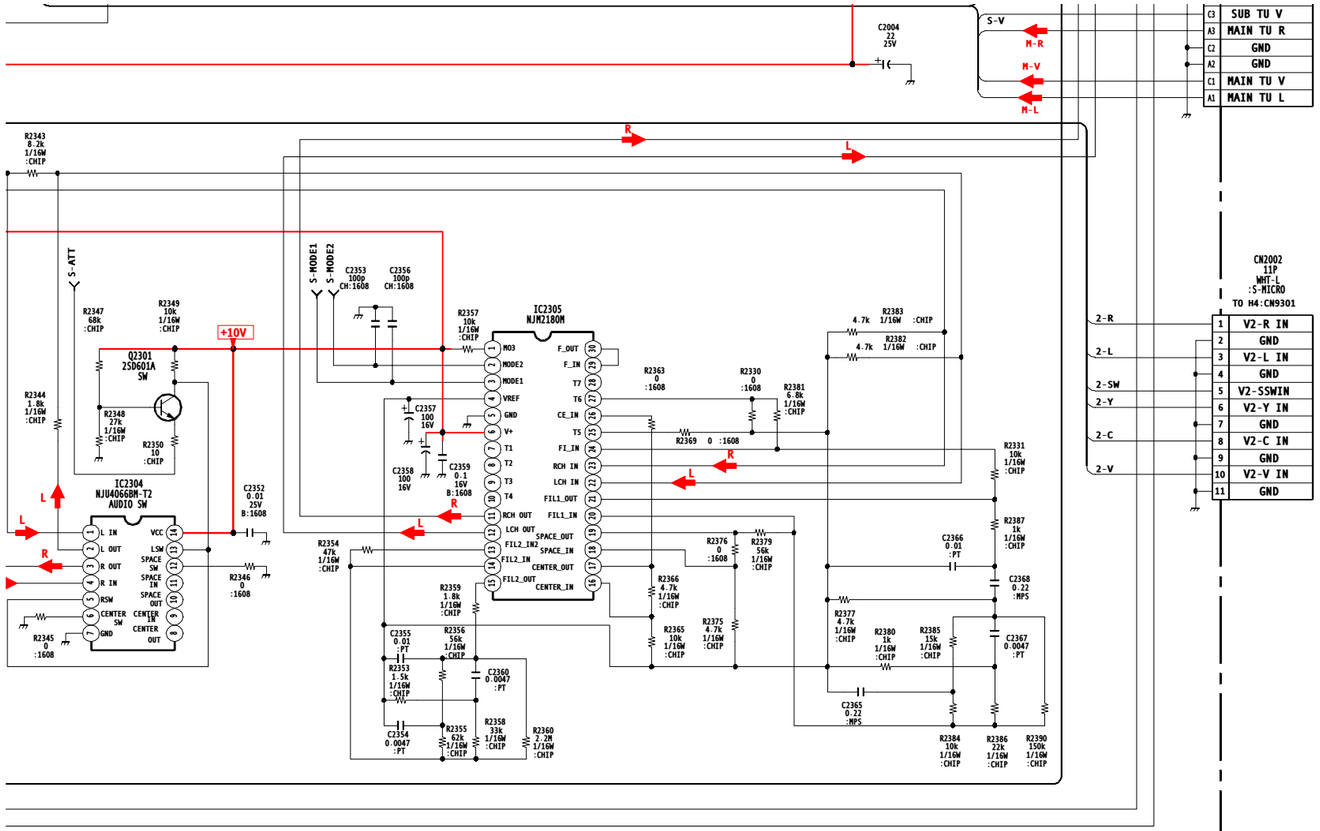




U BOARD IC VOLTAGE LIST

IC2001		IC2003		37	NC	19	5.0	17	6.0
PIN	VOLT	PIN	VOLT	38	4.5	20	NC	18	6.0
1	GND	1	4.5	39	NC	21	5.0	19	6.0
2	4.5	2	4.5	40	4.5	22	GND	20	6.0
3	9.0	3	4.4	41	4.4	23	NC	21	6.0
4	4.5	4	GND	42	9.0	24	GND	22	6.0
5	4.5	5	4.4	43	4.4	25	2.5	23	6.0
6	4.5	6	4.5	44	4.3	26	5.0	24	6.0
7	NC	7	4.5	45	4.5	27	2.2	25	6.0
8	NC	8	9.0	46	NC	28	2.2	26	6.0
9	NC	IC2004		47	4.4	29	5.0	27	6.0
10	4.4	PIN	VOLT	48	NC	30	GND	28	NC
11	4.4	1	3.9	49	5.3	31	GND	29	6.0
12	4.5	2	4.4	50	4.5	32	1.8	30	6.0
13	4.5	3	3.9	51	4.4	IC2304		All voltages are in V.	
14	NC	4	4.4	52	4.5	PIN	VOLT		
15	NC	5	0.5	53	4.9	1	4.5		
16	NC	6	NC	54	4.5	2	4.5		
17	NC	7	4.9	55	NC	3	4.5		
18	4.4	8	4.5	56	4.5	4	4.5		
19	4.4	9	4.4	57	GND	5	8.6		
20	NC	10	4.3	58	4.3	6	0.3		
21	NC	11	4.4	59	4.4	7	GND		
22	NC	12	4.4	60	3.9	8	4.5		
23	4.4	13	NC	61	4.4	9	4.5		
24	4.5	14	NC	62	4.4	10	4.5		
25	4.4	15	3.9	63	4.3	11	4.5		
26	GND	16	4.4	64	4.5	12	0.3		
27	4.4	17	3.9	IC2007		13	8.6		
28	4.4	18	4.4	PIN	VOLT	14	9.0		
IC2002		19	4.4	1	1.8	IC2305			
PIN	VOLT	20	NC	2	GND	PIN	VOLT		
1	4.6	21	4.9	3	5.0	1	11.1		
2	5.0	22	3.9	4	1.1	2	0.0		
3	3.1	23	3.9	5	NC	3	0.0		
4	GND	24	4.4	6	5.0	4	6.0		
5	3.1	25	3.9	7	1.3	5	GND		
6	3.1	26	4.4	8	GND	6	10.0		
7	5.0	27	NC	9	2.0	7	NC		
8	4.6	28	0.1	10	2.7	8	NC		
9	4.6	29	NC	11	1.0	9	NC		
10	GND	30	NC	12	2.0	10	NC		
11	4.6	31	NC	13	GND	11	6.0		
12	5.0	32	GND	14	0.0	12	6.0		
13	9.0	33	4.4	15	GND	13	6.0		


J2009
2P
VIDEO 7
DVI AUDIO
J2005
5P
VIDEO 5
YPBPR FOR HD
OR DVD
J2004
3P
MONITOR OUT
J2003
3P
J2002
3P
VR
VB
VG
R
L
V
D2-CB
D2-Y
D1-CR
D1-CB
D1-Y
O-V
O-L
O-R
MAIN-R
SUB-R
MAIN-L
SUB-L
VIDEO
MONI-V
+9V
12V
IC2001
TEA6422DT
AUDIO SWITCH
IC2003
NJM4558-TE2
AUDIO-BUFFER
IC2002
M52055FP
YUV SW
Q2005
2SD601A
MUTE
Q2006
2SD601A
MUTE
Q2026
2SB709A
BUFFER
Q2012
2SB709A
BUFFER
Q2302
2SD601A
10V REG.
Q2010
2SD601A
SYNC SW
PR
PB
Y
U BOARD WAVEFORMS
1
2.2Vp-p (H)



RMS

U

A/V SWITCH
TERMINAL BLOCK
AUDIO PROCESSOR

9-965-935-01<RA6>U

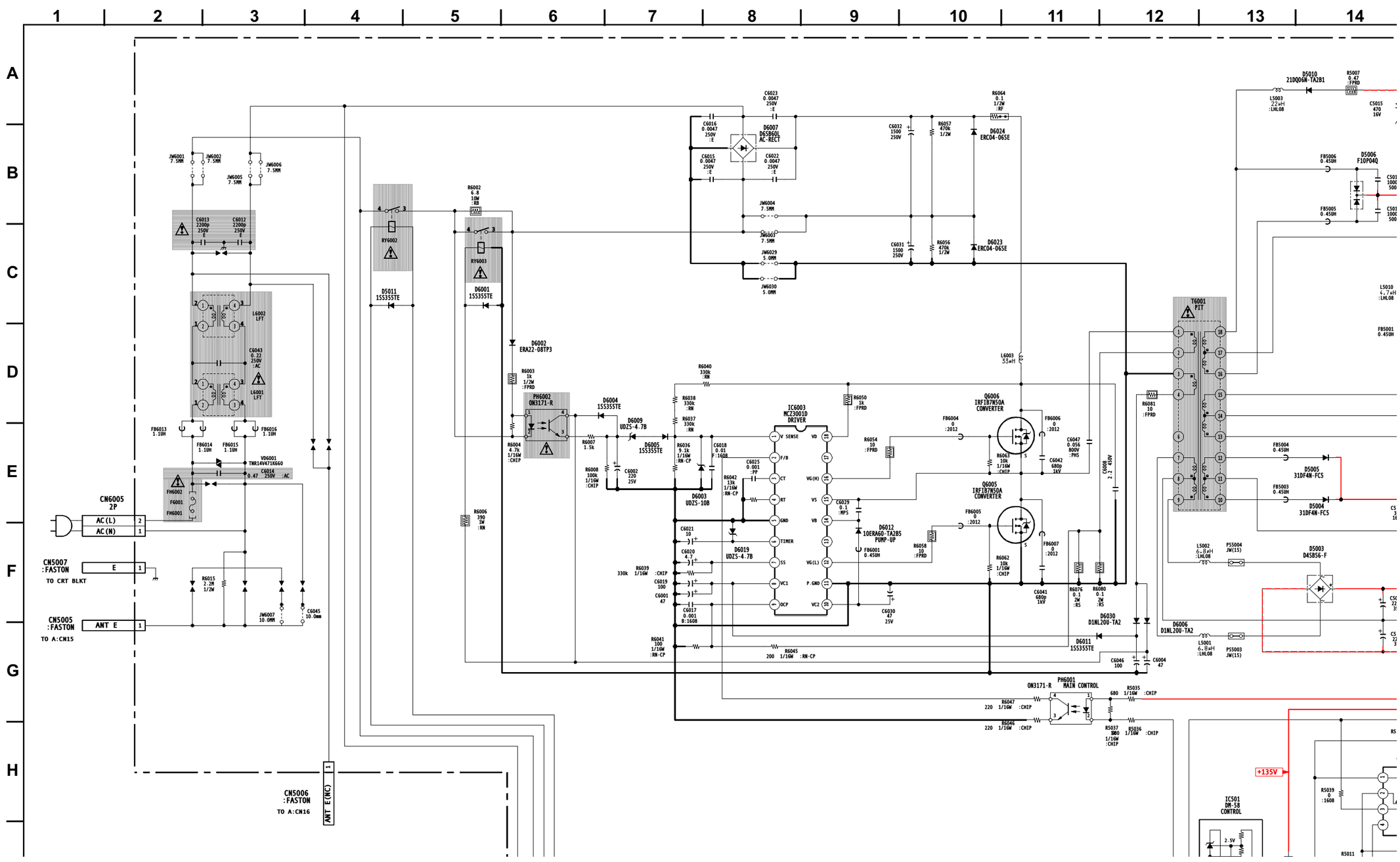
13	9.0	33	4.4	15	GND	13	6.0
14	4.6	34	4.4	16	GND	14	6.0
15	GND	35	GND	17	NC	15	6.0

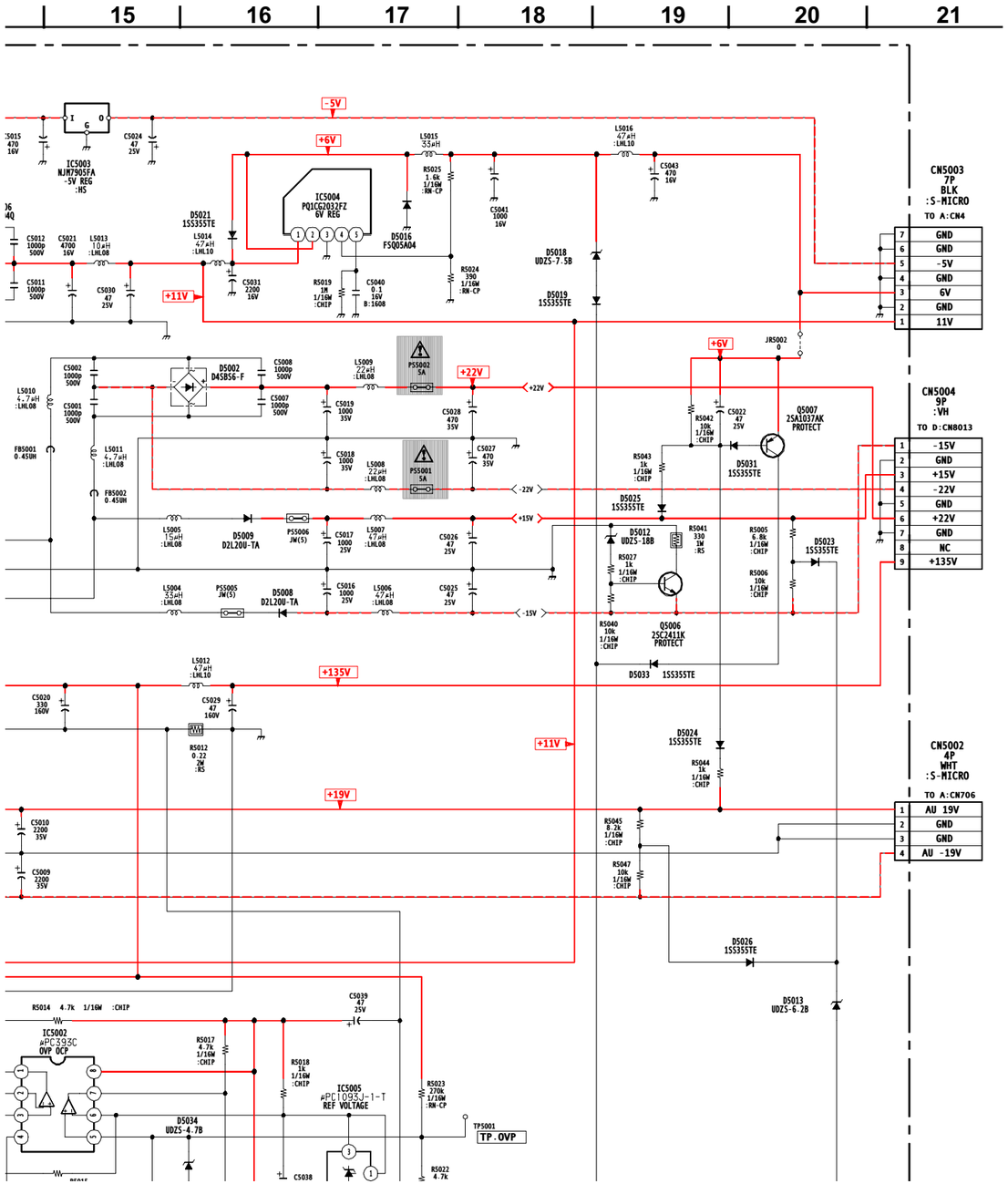
U BOARD TRANSISTOR TABLE

	B	C	E
Q2001	0.1	4.9	GND
Q2002	8.4	0.1	9.0
Q2003	7.8	5.6	8.5
Q2004	3.8	7.8	3.2
Q2005	0.3	0.0	GND
Q2006	0.3	0.0	GND
Q2007	0.4	0.0	0.0
Q2008	4.3	9.0	3.7
Q2009	4.4	9.0	3.7
Q2010	0.0	5.0	GND
Q2012	4.5	GND	5.1
Q2013	4.3	9.0	3.7
Q2015	4.5	9.0	3.9
Q2016	4.7	9.0	8.7
Q2017	5.0	9.0	4.4
Q2019	1.3	GND	2.0
Q2020	1.6	5.0	1.0
Q2021	4.2	1.3	4.8
Q2022	3.3	9.0	2.7
Q2024	1.5	4.2	0.9
Q2025	2.6	9.0	2.0
Q2026	7.2	5.1	7.9
Q2027	1.3	GND	2.0
Q2028	1.1	GND	1.7
Q2029	0.4	0.0	GND
Q2301	3.4	11.9	5.0
Q2302	0.0	12.0	12.0

All voltages are in V.

G BOARD SCHEMATIC DIAGRAM





G BOARD IC VOLTAGE LIST

IC501		IC5004		IC6003	
PIN	VOLT	PIN	VOLT	PIN	VOLT
1	134.4	1	10.4	1	-0.3
3	2.5	2	6.5	2	-0.3
4	7.3	3	GND	3	-0.3
5	GND	4	1.2	4	-0.2
IC5002		5	6.7	5	GND
PIN	VOLT	**IC5005**		6	0.0
1	-0.1	PIN	VOLT	7	0.0
2	0.1	1	2.3	8	0.0
3	0.0	2	0.0	9	0.0
4	-0.1	3	2.3	10	0.0
5	2.2	**IC5006**		11	GND
6	2.3	PIN	VOLT	12	0.0
7	-0.1	I	9.8	13	N/C
8	5.0	O	5.0	14	0.3
IC5003		G	GND	15	0.3
PIN	VOLT			16	0.3
I	-9.0			17	N/C
O	-5.0			18	0.2
G	GND				

All voltages are in V.

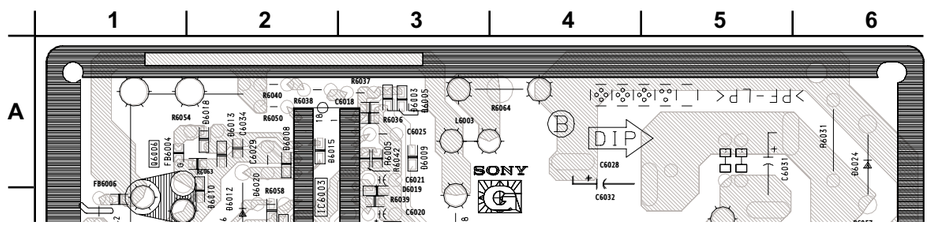
G BOARD TRANSISTOR VOLTAGE LIST

	B	C	E
Q5001	0.7	0	GND
Q5002	0.0	0.7	GND
Q5003	3.0	0.0	3.0
Q5004	0.0	3.0	GND
Q5005	22.3	9.1	22.8
Q5006	-15.0	0.0	-15.0
Q5007	6.2	0.1	6.2

	D	G	S
Q6005	0.3	-0.1	GND
Q6006	0.3	0.3	0.3

All voltages are in V.

G [POWER SUPPLY] [COMPONENT SIDE]



I

J

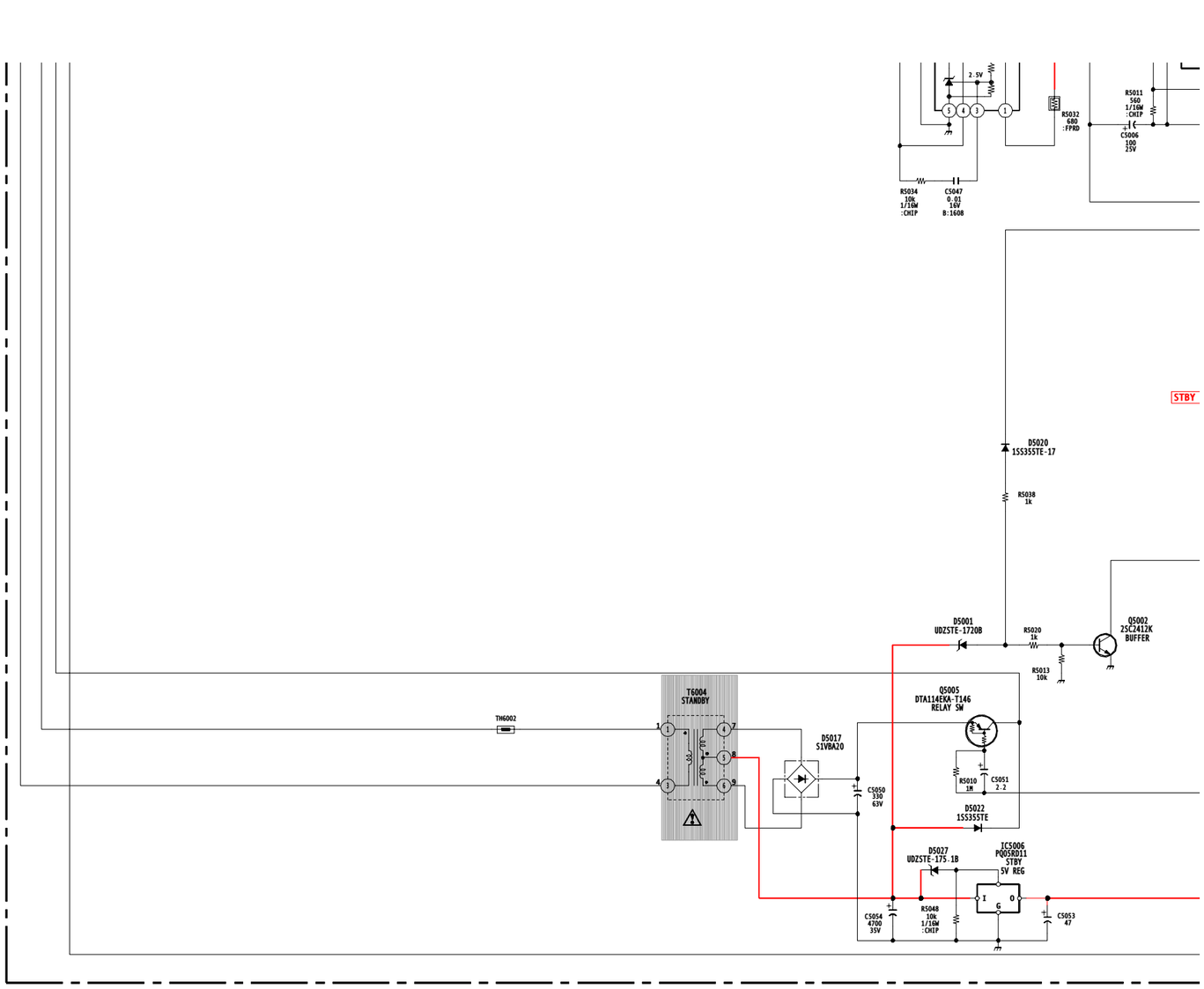
K

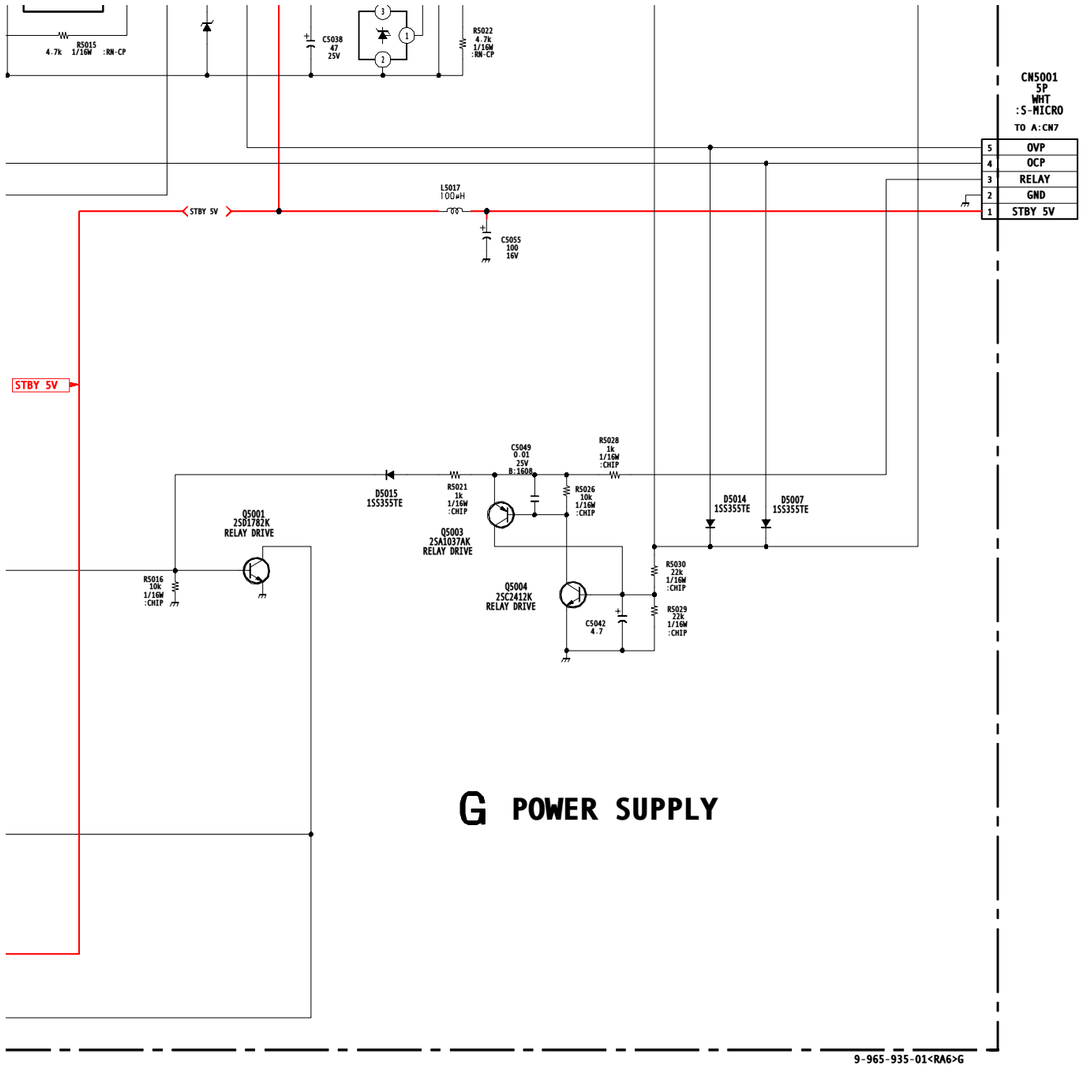
L

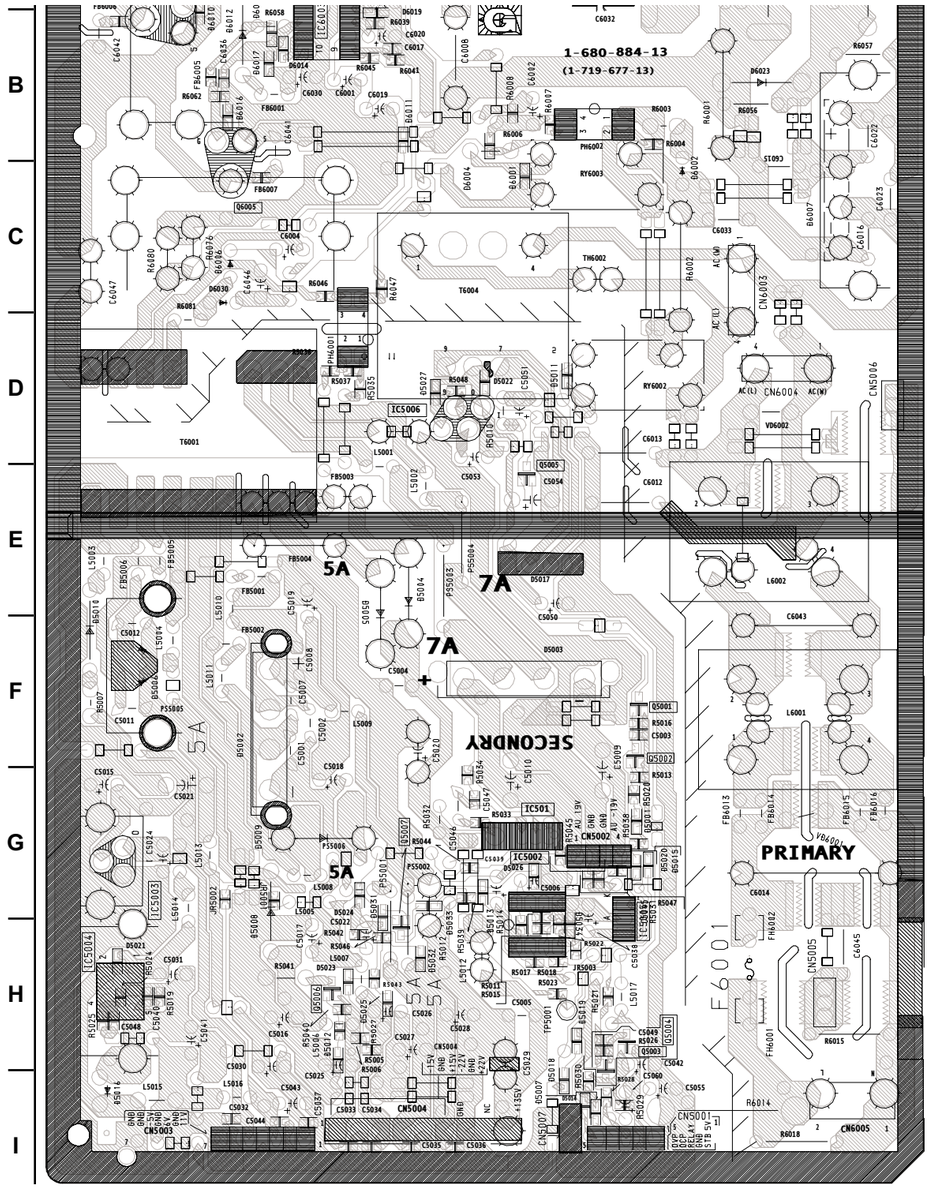
M

N

O


2.5V
R5011
560
1/10W
:CHIP
C5006
100
25V
R5032
680
:FPRD
R5034
10k
1/16W
:CHIP
C5047
0.01
16V
B:1608
STBY
D5020
1SS355TE-17
R5038
1k
D5001
UDZSTE-1720B
R5020
1k
R5013
10k
Q5002
2SC2412K
BUFFER
Q5005
DTA114EKA-T146
RELAY SW
R5010
1M
C5051
2.2
D5022
1SS355TE
T6004
STANDBY
TH6002
D5017
S1VBA20
C5050
330
63V
D5027
UDZSTE-175.1B
IC5006
PQ05RD11
STBY
5V REG
R5048
10k
1/16W
:CHIP
C5054
4700
35V
C5053
47


CN5001
5P
WHT
:S-MICRO
TO A:CN7
5 OVP
4 OCP
3 RELAY
2 GND
1 STBY 5V
STBY 5V
R5015
4.7k 1/10W :RN-CP
C5038
47
25V
R5022
4.7k
1/10W
:RN-CP
L5017
100uH
C5055
100
16V
C5049
0.01
25V
B:1608
R5028
1k
1/16W
:CHIP
R5021
1k
1/10W
:CHIP
R5026
10k
1/10W
:CHIP
D5015
1SS355TE
D5014
1SS355TE
D5007
1SS355TE
Q5001
2SD1782K
RELAY DRIVE
Q5003
2SA1037AK
RELAY DRIVE
Q5004
2SC2412K
RELAY DRIVE
R5016
10k
1/10W
:CHIP
R5030
22k
1/16W
:CHIP
R5029
22k
1/16W
:CHIP
C5042
4.7
G POWER SUPPLY
9-965-935-01<RA6>G


B
C
D
E
F
G
H
I
1-680-884-13
(1-719-677-13)
5A
7A
SECONDRY
PRIMARY
IC5006
IC501
IC5002
CN5002
CN5004
CN5003
CN5001
CN6005
CN6004
CN6003
CN5005
CN5006
F6001
T6001
T6004
TH6002
RY6002
RY6003
PH6002
PH6001
VD6002
L6002
L6001
IC5004
IC5003

SONY

4-088-847-12

Wide Screen Projection TV

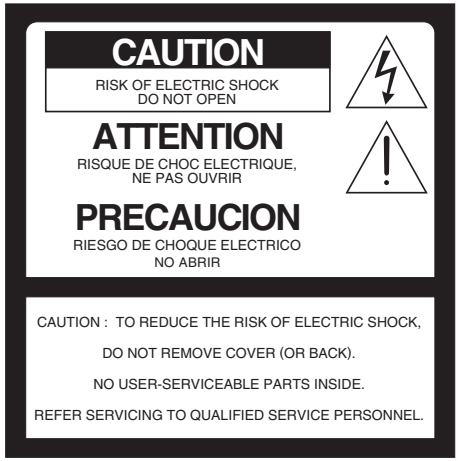
Operating Instructions

© 2002 Sony Corporation

KP-46WT500
KP-57WS500
KP-51WS500
KP-65WS500

WARNING

To prevent fire or shock hazard, do not expose the projection TV to rain or moisture.



This symbol is intended to alert the user to the presence of uninsulated “dangerous voltage” within the product’s enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

This symbol is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

CAUTION

To prevent electric shock, do not use this polarized AC plug with an extension cord, receptacle or other outlet unless the blades can be fully inserted to prevent blade exposure.

CAUTION

When using TV games, computers, and similar products with your projection TV, or viewing a TV station whose logo always stays on the screen, keep the brightness and contrast functions at low settings. If a fixed (non-moving) pattern such as a station logo is left on the screen for long periods of time, especially at a high brightness or contrast setting, the image can be permanently imprinted onto the screen. These types of imprints are not covered by your warranty.

Note on Caption Vision

This television receiver provides display of television closed captioning in accordance with §15.119 of the FCC rules.

Note on convergence adjustment

Before you use your projection TV, make sure to adjust convergence. For details, see “Adjusting the Convergence Automatically – FLASH FOCUS™ –” on page 33.

Note to CATV system installer

This reminder is provided to call the CATV system installer’s attention to Article 820-40 of the NEC that provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the building, as close to the point of cable entry as practical.

Use of this television receiver for other than private viewing of programs broadcast on UHF, VHF, transmitted by cable companies or satellite for the use of the general public may require authorization from the broadcaster/cable company and/or program owner.

NOTIFICATION

This equipment has been tested and found to comply with the limits for a Class B digital device pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference with radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- ❑ Reorient or relocate the receiving antennas.
- ❑ Increase the separation between the equipment and receiver.
- ❑ Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- ❑ Consult the dealer or an experienced radio/TV technician for help.

You are cautioned that any changes or modifications not expressly approved in this manual could void your warranty and your authority to operate this equipment.

CAUTION

How to reduce the risk of "Image Retention" on your Projection TV

Bright, stationary images such as TV station logos displayed on your TV can cause permanent damage to your TV, resulting in retention of the image in the picture.

Please take the following steps to reduce the risk of causing image retention:

View a variety of program sources or programming material.

Image retention can occur when bright stationary images such as TV station logos are viewed. Changing the program material viewed reduces the possibility that a single image will become imprinted on the picture tubes in your TV.

When viewing programs with stationary images, adjust the picture setting to reduce the "Picture" and "Brightness" levels. Image retention is accelerated by higher "Brightness" and higher "Picture" settings.

Please refer to your instruction manual for instructions on adjusting picture settings.

This will help you reduce the risk of causing image retention.

IMAGE RETENTION IS NOT COVERED BY YOUR WARRANTY

This document is for the remote control RM-Y909.

MODELS: KP-46WT500, KP-51WS500, KP-57WS500, and KP-65WS500.

Please keep this notice with the instruction manual.

Safety

- ❑ Operate the projection TV only on 120 V AC.
- ❑ The plug is designed, for safety purposes, to fit into the wall outlet only one way. If you are unable to insert the plug fully into the outlet, contact your dealer.
- ❑ If any liquid or solid object should fall inside the cabinet, unplug the projection TV immediately and have it checked by qualified service personnel before operating it further.
- ❑ If you will not be using the projection TV for several days, disconnect the power by pulling the plug itself. Never pull on the cord.

  For details concerning safety precautions, see "IMPORTANT SAFEGUARDS" on page 4.

Installing

- ❑ To prevent internal heat buildup, do not block the ventilation openings.
- ❑ Do not install the projection TV in a hot or humid place, or in a place subject to excessive dust or mechanical vibration.
- ❑ Avoid operating the projection TV at temperatures below 5°C (41°F).
- ❑ If the projection TV is transported directly from a cold to a warm location, or if the room temperature changes suddenly, the picture may be blurred or show poor color due to moisture condensation. In this case, please wait a few hours to let the moisture evaporate before turning on the projection TV.
- ❑ To obtain the best picture, do not expose the screen to direct illumination or direct sunlight. It is recommended to use spot lighting directed down from the ceiling or to cover the windows that face the screen with opaque drapery. It is desirable to install the projection TV in a room where the floor and walls are not of a reflective material.

As an ENERGY STAR® Partner, Sony Corporation has determined that this product meets the ENERGY STAR® guidelines for energy efficiency.

Trademark Information

TruSurround and the (●)® symbol are trademarks of SRS Labs, Inc. TruSurround technology is incorporated under license from SRS Labs, Inc.

BBE and BBE Symbol are trademarks of BBE Sound, Inc. and are licensed by BBE Sound, Inc. under U.S. Patent No. 4,638,258 and 4,482,866.

Steady Sound, Digital Reality Creation, Caption Vision, CineMotion, Memory Stick, and Twin View are registered trademarks of Sony Corporation. ClearEdge VM and HD Detailer are trademarks of Sony Corporation.

Owner's Record

The model and serial numbers are located at the rear of the projection TV, below the Sony logo, on the sticker, and also on the TV box (white label). Record these numbers in the spaces provided below. Refer to them whenever you call upon your Sony dealer regarding this product.

Model No._____

Serial No._____

IMPORTANT SAFEGUARDS

For your protection, please read these instructions completely, and keep this manual for future reference.

Carefully observe and comply with all warnings, cautions and instructions placed on the set or described in the operating instructions or service manual.

WARNING

To guard against injury, the following basic safety precautions should be observed in the installation, use and servicing of the set.

Use

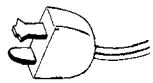
Power Sources

This set should be operated only from the type of power source indicated on the serial/model plate. If you are not sure of the type of electrical power supplied to your home, consult your dealer or local power company. For those sets designed to operate from battery power, refer to the operating instructions.

Grounding or Polarization

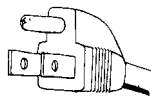
This set is equipped with a polarized AC power cord plug (a plug having one blade wider than the other), or with a three-wire grounding type plug (a plug having a third pin for grounding). Follow the instructions below:

For the set with a polarized AC power cord plug



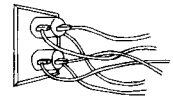
This plug will fit into the power outlet only one way. This is a safety feature. If you are unable to insert the plug fully into the outlet, try reversing the plug. If the plug still fails to fit, contact your electrician to have a suitable outlet installed. Do not defeat the safety purpose of the polarized plug by forcing it in.

For the set with a three-wire grounding type AC plug



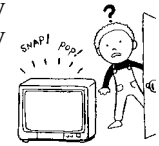
This plug will only fit into a grounding-type power outlet. This is a safety feature. If you are unable to insert the plug into the outlet, contact your electrician to have a suitable outlet installed. Do not defeat the safety purpose of the grounding plug.

Overloading



Do not overload wall outlets, extension cords or convenience receptacles beyond their capacity, since this can result in fire or electric shock.

Always turn the set off when it is not being used. When the set is left unattended and unused for long periods of time, unplug it from the wall outlet as a precaution against the possibility of an internal malfunction that could create a fire hazard.

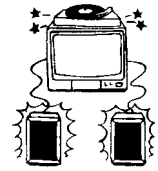


If a snapping or popping sound from a TV set is continuous or frequent while the TV is operating, unplug the TV and consult your dealer or service technician. It is normal for some TV sets to make occasional snapping or popping sounds, particularly when being turned on or off.

Object and Liquid Entry

Never push objects of any kind into the set through the cabinet slots as they may touch dangerous voltage points or short out parts that could result in a fire or electric shock. Never spill liquid of any kind on the set.

Attachments



Do not use attachments not recommended by the manufacturer, as they may cause hazards.

Cleaning

Clean the cabinet of the projection TV with a dry soft cloth. To remove dust from the screen, wipe it gently with a soft cloth. Stubborn stains may be removed with a cloth slightly dampened with solution of mild soap and warm water. Never use strong solvents such as thinner or benzine for cleaning.

If the picture becomes dark after using the projection TV for a long period of time, it may be necessary to clean the inside of the projection TV. Consult qualified service personnel.

Installation

Water and Moisture

Do not use power-line operated sets near water — for example, near a bathtub, washbowl, kitchen sink, or laundry tub, in a wet basement, or near a swimming pool, etc.

Accessories

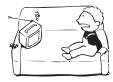
Do not place the set on an unstable cart, stand, table or shelf. The set may fall, causing serious injury to a child or an adult and serious damage to the set. Use only a cart or stand recommended by Sony for the specific model of TV. No part of the TV set should overhang any edge of the TV cart or stand; any overhanging edge is a safety hazard. An appliance and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the appliance and cart combination to overturn.

Ventilation

The slots and openings in the cabinet and in the back or bottom are provided for necessary ventilation. To ensure reliable operation of the set, and to protect it from overheating, these slots and openings must never be blocked or covered.

- ❑ Never cover the slots and openings with a cloth or other materials.

- ❑ Never block the slots and openings by placing the set on a bed, sofa, rug or other similar surface.

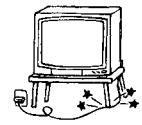


- ❑ Never place the set in a confined space, such as a bookcase or built-in cabinet, unless proper ventilation is provided.

- ❑ Do not place the set near or over a radiator or heat register, or where it is exposed to direct sunlight.

Power-Cord Protection

Do not allow anything to rest on or roll over the power cord, and do not place the set where the power cord is subject to wear or abuse.



Antennas

Outdoor Antenna Grounding

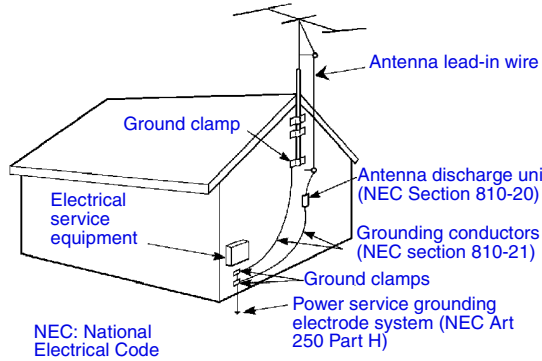
If an outdoor antenna is installed, follow the precautions below. An outdoor antenna system should not be located in the vicinity of overhead power lines or other electric light or power circuits, or where it can come in contact with such power lines or circuits.

WHEN INSTALLING AN OUTDOOR ANTENNA SYSTEM, EXTREME CARE SHOULD BE TAKEN TO KEEP FROM CONTACTING SUCH POWER LINES OR CIRCUITS AS CONTACT WITH THEM IS ALMOST INVARIABLY FATAL.

Be sure the antenna system is grounded so as to provide some protection against voltage surges and built-up static charges.

Section 810 of the National Electrical Code (NEC) in USA and Section 54 of the Canadian Electrical Code in Canada provides information with respect to proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna discharge unit, size of grounding conductors, location of antenna discharge unit, connection to grounding electrodes, and requirements for the grounding electrode.

Antenna Grounding According to the National Electrical Code, ANSI/NFPA 70


Antenna lead-in wire
Ground clamp
Antenna discharge unit (NEC Section 810-20)
Electrical service equipment
Grounding conductors (NEC section 810-21)
Ground clamps
Power service grounding electrode system (NEC Art 250 Part H)
NEC: National Electrical Code

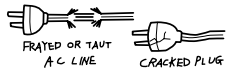
Lightning

For added protection for this television receiver during a lightning storm, or when it is left unattended and unused for long periods of time, unplug it from the wall outlet and disconnect the antenna. This will prevent damage to the receiver due to lightning and power-line surges.

Service

Damage Requiring Service

Unplug the set from the wall outlet and refer servicing to qualified service personnel under the following conditions:



- ❑ When the power cord or plug is damaged or frayed.
- ❑ If liquid has been spilled into the set.

- ❑ If the set has been exposed to rain or water.
- ❑ If the set has been subject to excessive shock by being dropped, or the cabinet has been damaged.

- ❑ If the set does not operate normally when following the operating instructions. Adjust only those controls that are specified in the operating instructions. Improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the set to normal operation.

- ❑ When the set exhibits a distinct change in performance, it indicates a need for service.

Servicing

Do not attempt to service the set by yourself since opening the cabinet may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.

Replacement Parts

When replacement parts are required, be sure the service technician certifies in writing that he has used replacement parts specified by the manufacturer that have the same characteristics as the original parts.

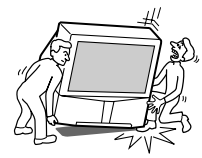
Unauthorized substitutions may result in fire, electric shock or other hazards.

Safety Check

Upon completion of any service or repairs to the set, ask the service technician to perform routine safety checks (as specified by the manufacturer) to determine that the set is in safe operating condition, and to so certify. When the set reaches the end of its useful life, improper disposal could result in a picture tube implosion. Ask a qualified service technician to dispose of the set.

For Safety

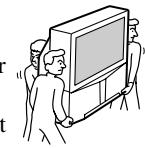
Be careful when moving the projection TV



When you place the projection TV in position, be careful not to drop it on your foot or fingers.

Watch your footing while installing the projection TV.

Carry the projection TV in the specified manner



If you carry the projection TV in a manner other than the specified manner and without the specified number of persons, it may drop and a serious injury may be caused. Be sure to follow the instructions mentioned below.

- ❑ Carry the projection TV with the specified number of persons. (see page 11)
- ❑ Do not carry the projection TV holding the speaker grill.
- ❑ Hold the projection TV tightly when carrying it.
- ❑ Model KP-65WS500 has handles that you can use to carry the unit.

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Introducing the Sony Projection TV

Presenting the Sony Projection TV

Thank you for purchasing the Sony Projection TV.
This manual is for models KP-46WT500, KP-51WS500, KP-57WS500, and KP-65WS500. KP-51WS500 is used for illustration purposes, unless indicated otherwise.

Features

Some of the features that you will enjoy with your new projection TV include:

- **Hi Scan 1080™**: Enables you to receive the 1080i, 720p, 480p and 480i digital TV formats. By using the VIDEO 5/6/7 IN jacks, you can connect a DTV (digital television) receiver to view DTV programs.
- **DRC™ Multi-Function:** Unlike conventional line doublers, the DRC feature doubles vertical and horizontal lines, resulting in four times the density for quality sources such as DVD, Satellite and Digital camcorder.
- **CineMotion™:** Using the 2-3 Pull-Down technology, the CineMotion feature allows you to obtain a smooth picture movement when playing back movies or other video sources on film.
- **Twin View™:** Using Multi-Image Driver (MID-X), Twin View allows you to watch two programs side by side with the ability to zoom in on one picture and listen to the program in the selected window. You can watch pictures from two different sources (1080i, 720p, 480p or 480i) simultaneously.
- **Steady Sound™:** Equalizes volume levels so there is consistent output between programs and commercials.
- **Parental Control:** V-Chip technology allows parents to block unsuitable programming for younger viewers.
- **Component Video Inputs:** Offers the best video quality for DVD (480p, 480i) and Digital Set-top box (1080i, 720p, 480p, 480i) connections.
- **S-VIDEO Inputs:** Provides a high-quality image for connected equipment.
- **Favorite Channel Preview:** Preview up to eight favorite channels without leaving the current channel.
- **Scrolling Channel Index:** Allows you to view and choose channels from scrolling pictures without leaving the current channel.

- **Wide Screen Mode:** Allows you to watch 4:3 normal broadcasts in wide screen mode (16:9 aspect ratio).
- **Auto Wide:** Allows you to select the wide screen mode automatically.
- **Flash Focus™**: Allows you to adjust convergence automatically.
- **Digital Visual Interface (DVI)**: Can accommodate a copyprotected digital connection (HDCP*) to other devices (such as digital set-top boxes) that have compatible interfaces. The DVI-HDTV input terminal is compliant with the EIA-861 standard and is not intended for use with personal computers.

Using this manual

We recommend that you carefully review the contents of the following three sections in the order shown to ensure that you fully understand the operation of your new projection TV.

1 Installing and Connecting the Projection TV

This section guides you through your initial setup. It shows you how to install your projection TV, to connect your new components and to connect the antenna and cable.

2 Using the Features

This section shows you how to begin using your new projection TV. It also shows you how to use your remote control functions.

3 Using the menus

This section teaches you how to access on-screen menus and adjust your projection TV settings.

Instructions in this manual are written for the remote control. Similar controls are also found on the projection TV console.

* High-bandwidth Digital Content Protection

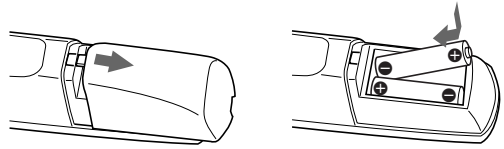
Installing and Connecting the Projection TV

Contents

The box contains your new projection TV, a remote control and two AA batteries. No peripheral cables are included. If you intend to add additional equipment to your projection TV, please check the hookup instructions for your desired setup before you begin. You may need to purchase cables and/or splitters to complete the hookup properly.

Inserting Batteries into the Remote Control

Insert two size AA (R6) batteries (supplied) by matching the + and – on the batteries to the diagram inside the battery compartment.



✍ Remove the batteries to avoid damage from possible battery leakage whenever you anticipate that the remote control will not be used for an extended period.

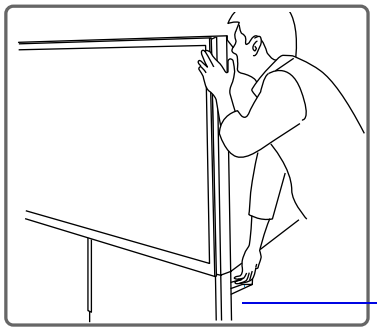
✍ Handle the remote control with care. Avoid dropping it, getting it wet, or placing it in direct sunlight, near a heater, or where the humidity is high.

✍ Your remote control can be programmed to operate most video equipment. (See “Programming the Remote Control” on page 68.)

Carrying Your Projection TV

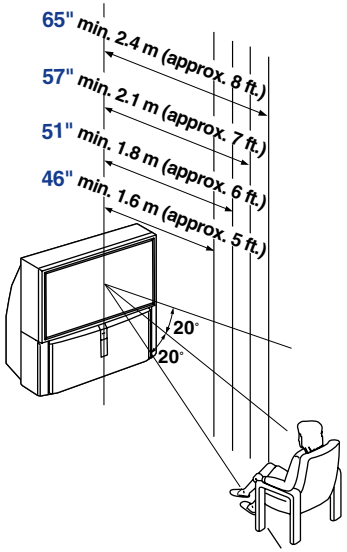
Carrying the projection TV requires four (4) or more people.

The projection TV has been equipped with casters for easy movement on a hard surface. Please move your projection TV using the casters. (KP-51WS500, KP-57WS500, and KP-65WS500 only)

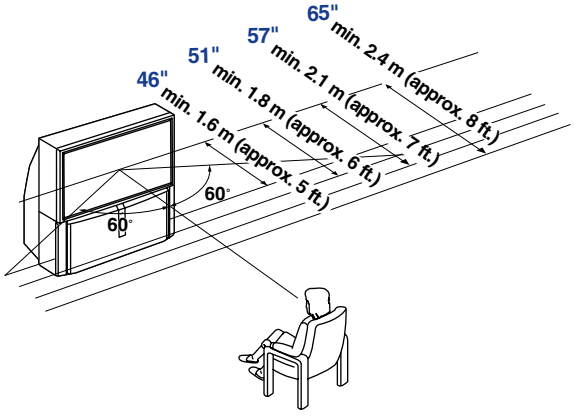


Handle (one on each side)
(KP-65WS500 only)

Installing the Projection TV



Recommended viewing area (Vertical)



Recommended viewing area (Horizontal)

Connector Types

You may find it necessary to use some of the following connector types during set up.

Coaxial cable

Standard TV cable and antenna cable

Plug Type

Screw-on Type

S Video cable

High quality video cable for enhanced picture quality

Audio/Video cable

Video - Yellow
Audio (Left) - White
Audio (Right) - Red

Some DVD Players are equipped with the following three video connectors:

Y - Green
P_B (C_B, C_b or B–Y) - Blue
P_R (C_R, C_r or R–Y) - Red

CONTROL S cable

CONTROL S connections are exclusive to Sony products and allow greater control of all Sony equipment.

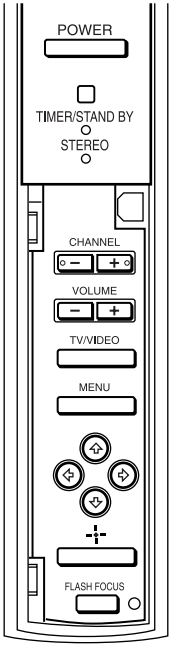
DVI cable

DVI connection for a high-bandwidth copy-protected signal

Projection TV Controls and Connectors

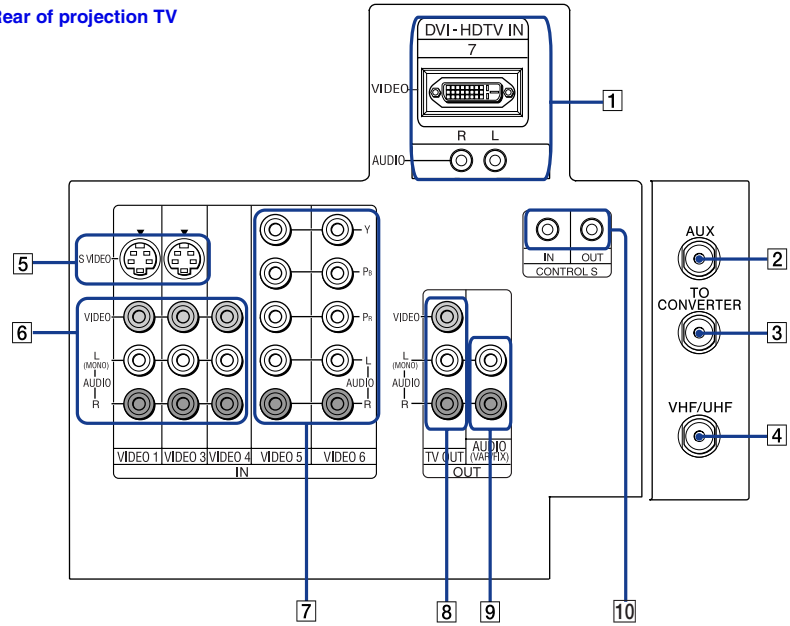
Front Panel Menu Controls

The front panel menu controls allow access to the on-screen menus without the use of a remote control. Pressing MENU brings up the on-screen menus. The arrow buttons move the on-screen cursor in the menus and by pressing the Select button (⊹) selects the menu item.

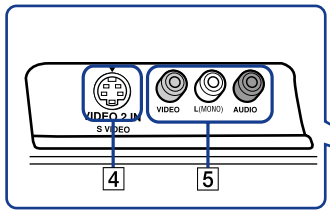


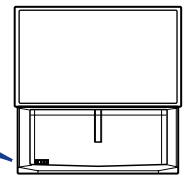
Projection TV Rear and Front Panel Connectors

Rear of projection TV



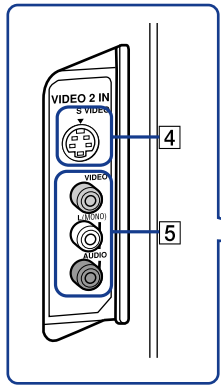
Front of projection TV

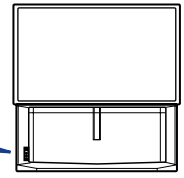




KP-46WT500

Front of projection TV





KP-51WS500, KP-57WS500, and KP-65WS500

	Connection	Description
1	DVI-HDTV VIDEO AUDIO R/L (VIDEO 7 IN)	Can accommodate a copy-protected digital connection (HDCP*) to other devices (such as digital set-top boxes) that have compatible interfaces. The DVI-HDTV input terminal is compliant with the EIA-861 standard, and is not intended for use with personal computers. See the instruction manual that came with your equipment for details about connecting and using it with the TV.
2	AUX	Allows you to view local and cable channels if your cable provider does not feature local channels. You can switch between local and cable channels easily by pressing ANT on the remote control. Devices connected to the AUX input cannot be viewed in Twin View.
3	TO CONVERTER	This is a VHF/UHF OUT jack that lets you set up your projection TV to switch between scrambled channels (through a cable box) and normal cable channels (CATV). Use this jack instead of a splitter to get better picture quality when switching between scrambled and unscrambled cable channels.
4	VHF/UHF	Connects to your VHF/UHF antenna or cable.
5	S VIDEO (Rear and front)	Connects to the S VIDEO OUT jack of your VCR or other S VIDEO-equipped video component. Provides better picture quality than the VHF/UHF jacks or the Video IN jack.
6	VIDEO (L/R)/AUDIO (Rear and front)	Connects to the audio and video OUT jacks on your VCR or other video component. A fourth video input (VIDEO 2) is located on the front panel of the projection TV.
7	Y/P_B/P_R (L/R)/AUDIO	Connects to your DVD player's or Digital Set-top box's component video (Y, P_B, P_R) and audio (L/R) jacks.
8	TV OUT	Outputs the signal that the TV is tuned to (regardless of the picture displayed on the screen).
9	AUDIO OUT (VAR/FIX) L (MONO)/R	Connects to the left and right audio inputs of your audio or video component.
10	CONTROL S IN/OUT	To control other Sony equipment with the projection TV's remote control, connect the CONTROL S IN jack of the equipment to the CONTROL S OUT jack on the projection TV with the CONTROL S cable. To control the projection TV with a remote control for another Sony product, connect the CONTROL S OUT jack of the equipment to the CONTROL S IN jack on the projection TV with the CONTROL S cable.

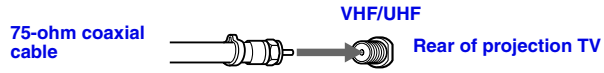
* High-bandwidth Digital Content Protection.

Basic Connections (Connecting Cable TV or Antenna)

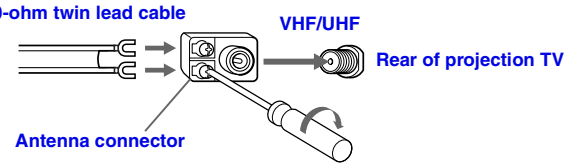
Connecting Directly to Cable or an Antenna

The connection you choose depends on the cable found in your home. Newer homes are equipped with standard coaxial cable (see **A**); older homes probably have 300-ohm twin lead cable (see **B**); other homes may contain both (see **C**).

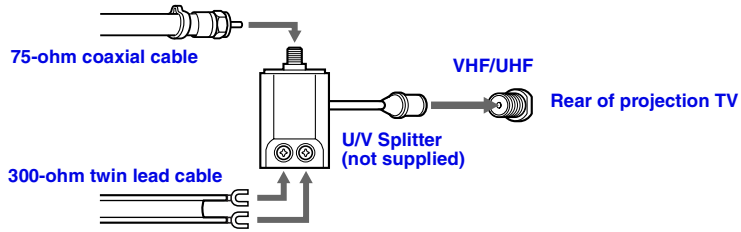
A VHF Only or VHF/UHF or Cable



B VHF Only or UHF Only or VHF/UHF

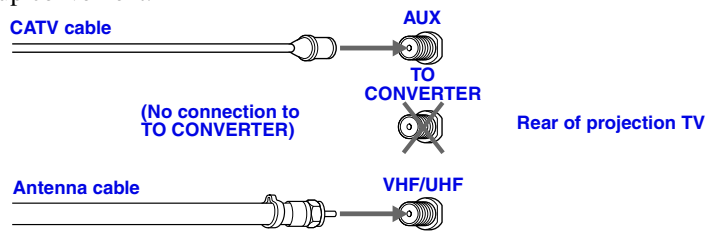


C VHF and UHF



Cable and Antenna

If your cable provider does not feature local channels, you may find this setup convenient.



Select CABLE or antenna (ANT) mode by pressing ANT on the remote control.

✍ To receive channels with an antenna, you need to turn your Cable to OFF (see page 53) and perform the Auto Program function (see page 54).

Cable Box Connections

Cable Box and Cable

This is the preferred basic cable TV hookup to use if:

- ❑ Your cable TV company scrambles some channels, but not all of them (pay channels vs. regular cable channels) and you need to use a cable box, and
- ❑ You want to enjoy the Twin View feature.

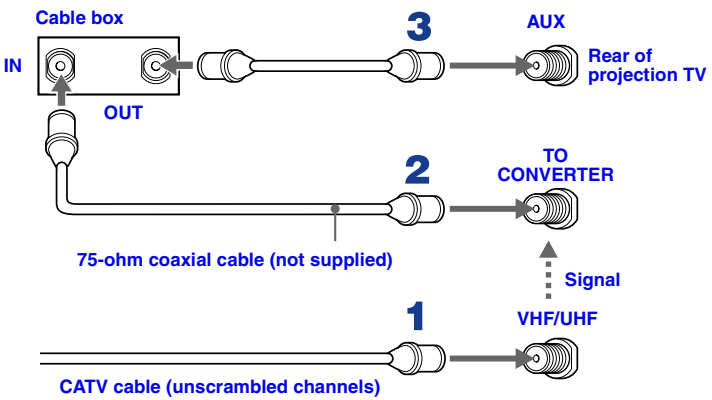
With this setup you can:

- ❑ Use the projection TV remote control to change channels using your cable box when the signal is scrambled.
- ❑ Use the projection TV remote control to change channels using your projection TV when the signal is not scrambled. (Your projection TV's tuner provides a better signal than the cable box.)
- ❑ Use the Twin View feature. (When all channels are routed through your cable box, only one channel is sent to the projection TV, so you can not use the Twin View or Channel Index features for your cable box.)

1 Connect the Cable TV cable to the projection TV's VHF/UHF jack.

2 Using a coaxial cable, connect the projection TV's TO CONVERTER jack to the cable box's IN jack. The projection TV's internal converter allows you to switch between unscrambled signals coming straight into the projection TV and scrambled signals coming in through the cable box, eliminating the need for an external splitter.

3 Using a coaxial cable, connect the cable box's OUT jack to the projection TV's AUX jack.



✍ Pressing ANT on the remote control switches between the channels coming in through the cable box (scrambled) and those coming directly to the TV (unscrambled).

Cable Box Only

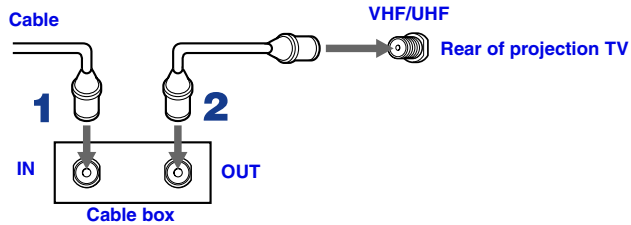
Use this hookup if:

- ❑ You subscribe to a cable TV system that uses scrambled or encoded signals requiring a cable box to view all channels, and
- ❑ You do not intend to hook up any other audio or video equipment to your projection TV.

When all channels are routed through your cable box, only one unscrambled channel is sent to the projection TV, so you cannot use the Twin View feature. If some channels are scrambled, but others are not, consider using the hookup on page 17 instead.

1 Connect the coaxial connector from your cable service to the cable box's IN jack.

2 Using a coaxial cable, connect the cable box's OUT jack to the TV's VHF/UHF jack.



Also, set Cable to ON in the Channel menu (see page 53).

Setting the Channel Fix feature in the Channel menu (see "Using the Channel Menu" on page 53), ensures that you do not accidentally switch the channels using your projection TV.

✍ Your Sony remote control can be programmed to operate your cable box (see "Programming the Remote Control" on page 68).

✍ To change channels using the cable box, set your projection TV to channel 3 or 4 depending on the cable box channel output. If you will be controlling all channel selection through your cable box, consider using the Channel Fix feature to set your projection TV to channel 3 or 4 (see page 54).

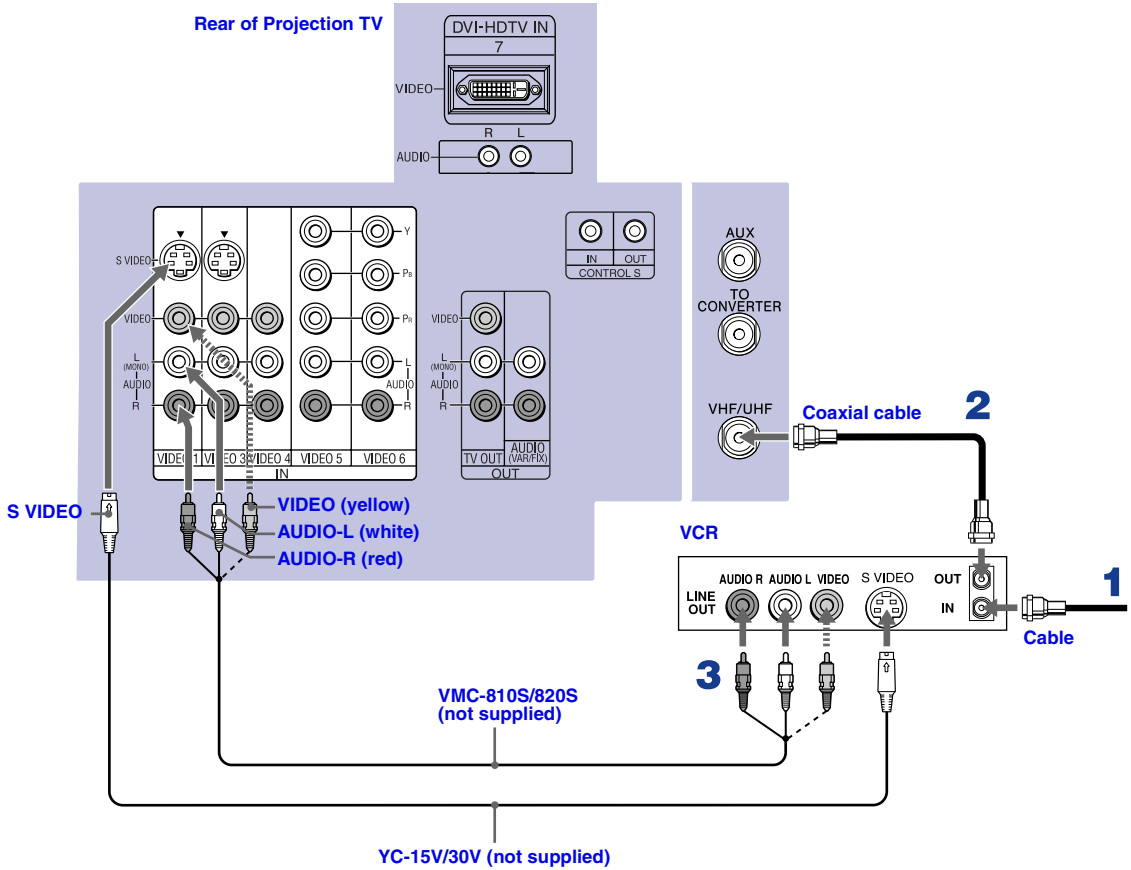
Connecting a VCR and Cable

Use this hookup if:

- ❑ You have cable TV that does not require a cable box.

Disconnect all power sources before making any connections.

1. Connect the cable TV cable to the VCR's IN jack.
2. Using a coaxial cable, connect the VCR's OUT jack to the projection TV's VHF/UHF jack.
3. Using AUDIO and S VIDEO cables, connect the VCR's Audio and S Video OUT jacks to the projection TV's AUDIO and S VIDEO IN jacks.



✍ If your VCR is not equipped with S VIDEO, use a VIDEO cable (yellow) instead of the S VIDEO cable.

Connecting a VCR and Cable Box

Use this hookup if:

- Your cable TV company scrambles some channels, but not all of them (pay channels vs. regular cable channels) and you need to use a cable box, and
- You want to enjoy the Twin View feature.

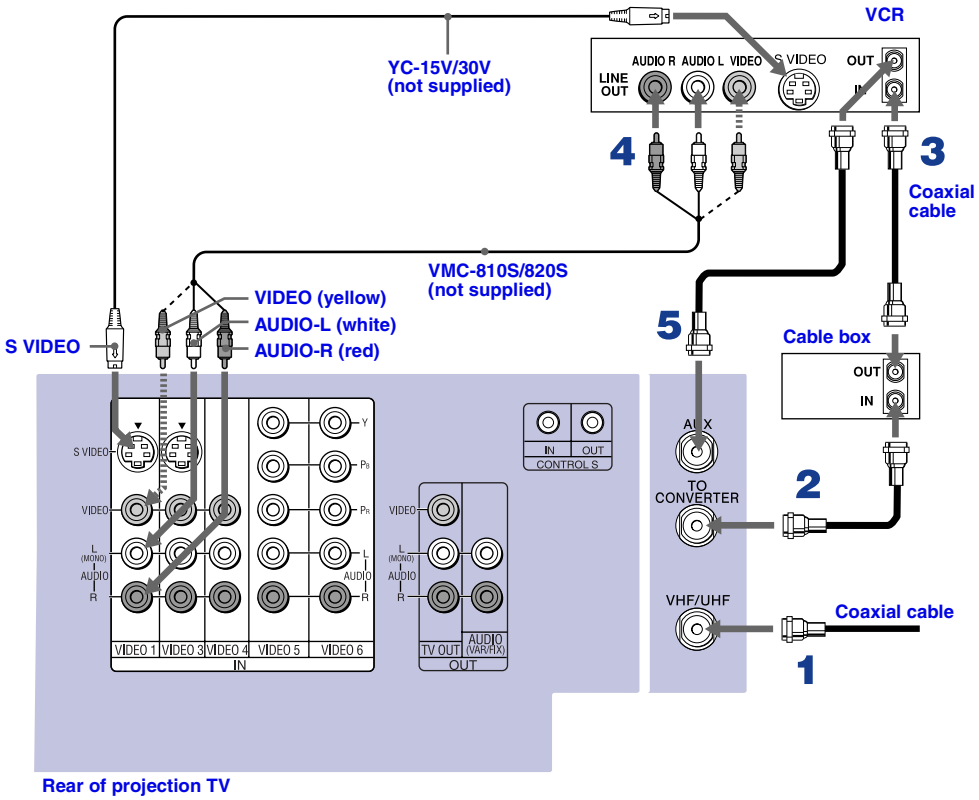
With this setup you can:

- Use the projection TV remote control to change channels on your cable box when the signal is scrambled. To program your Sony remote control to operate your cable box, see “Programming the Remote Control” on page 68.
- Use the projection TV remote control to change channels using your projection TV when the signal is not scrambled. Your projection TV’s tuner provides a better signal than the cable box.
- Use the Twin View feature. (When all channels are routed through your cable box, only one signal is sent to the projection TV, so you cannot use the Twin View feature.)

Disconnect all power sources before making any connections.

1. Connect the Cable TV cable to the projection TV’s VHF/UHF jack.
2. Using a coaxial cable, connect the TV’s TO CONVERTER jack to the cable box’s IN jack. The projection TV’s internal converter allows you to switch between unscrambled signals coming straight into the projection TV and scrambled signals coming in through the cable box, eliminating the need for an external splitter.
3. Using a coaxial cable, connect the cable box’s OUT jack to the VCR’s IN jack.
4. Using AUDIO and S VIDEO cables, connect the VCR’s AUDIO and S VIDEO OUT jacks to the projection TV’s AUDIO and S VIDEO IN jacks.
5. Using a coaxial cable, connect the VCR’s OUT jack to the projection TV’s AUX jack.

✍ To view scrambled channels, set your projection TV to AUX 3 or 4 (depending on your cable box output). Change channels using your cable box.



Rear of projection TV

✍ If your VCR is not equipped with S VIDEO, use a VIDEO cable (yellow) instead of the S VIDEO cable.

✍ You will not be able to change channeles on the VCR. Set your projection TV and VCR to channel 3 or 4, depending on your cable box channel output.

✍ Pressing ANT on the remote control switches between the channels coming in through the cable box (scrambled) and those coming directly to the projection TV (unscrambled).

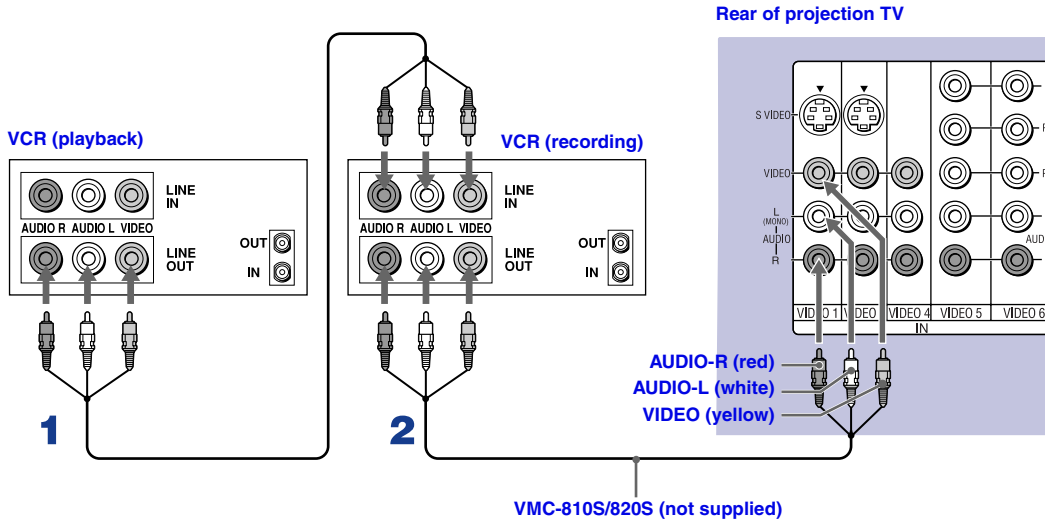
Connecting Two VCRs for Tape Editing

If you connect two VCRs, you can record from one VCR to the other while using your projection TV to monitor what is being recorded.

Disconnect all power sources before making any connections.

1 Using AUDIO and VIDEO cables, connect the playback VCR's Audio and Video OUT jacks to the recording VCR's Audio and Video IN jacks.

2 Using AUDIO and VIDEO cables, connect the recording VCR's AUDIO and Video OUT jacks to the projection TV's AUDIO and VIDEO IN jacks.



✍ To perform tape editing, set the projection TV to the video input intended for playback by pressing TV/VIDEO on the remote control.

✍ You may need to change the video input on your VCR. Consult your VCR's operating manual for instructions.

✍ If your VCRs have an S VIDEO jack: For best picture quality, use an S VIDEO connection instead of the yellow video cable on your combined A/V cable.
Using an S VIDEO cable, connect the playback VCR's S VIDEO OUT jack to the recording VCR's S VIDEO IN jack. S VIDEO does not provide audio, so audio cables must be connected to provide sound.

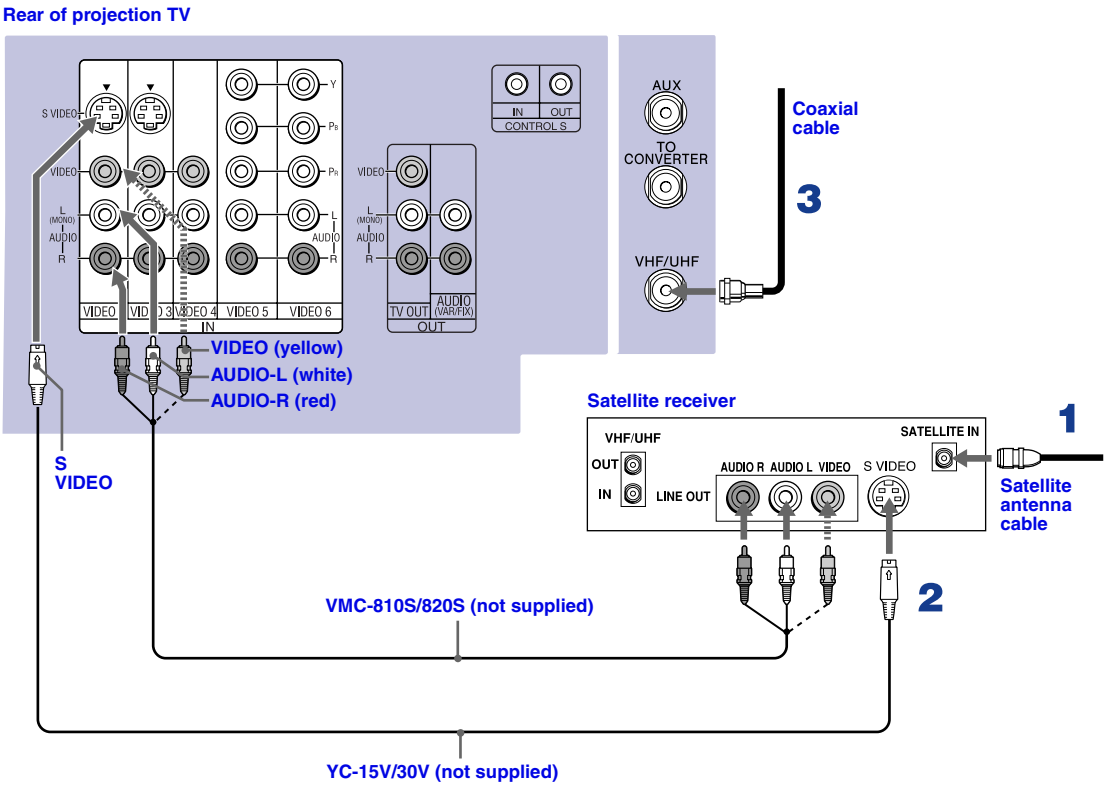
✍ You cannot record signals from equipment connected to the Y, P_B, P_R input.

Connecting a Satellite Receiver

Disconnect all power sources before making any connections.

1. Connect the satellite antenna cable to the satellite receiver's SATELLITE IN jack.
2. Using AUDIO and S VIDEO cables, connect the satellite receiver's AUDIO and S VIDEO OUT jacks to the projection TV's AUDIO and S VIDEO IN jacks.
3. Connect a coaxial cable from your cable or antenna to the projection TV's VHF/UHF jack.

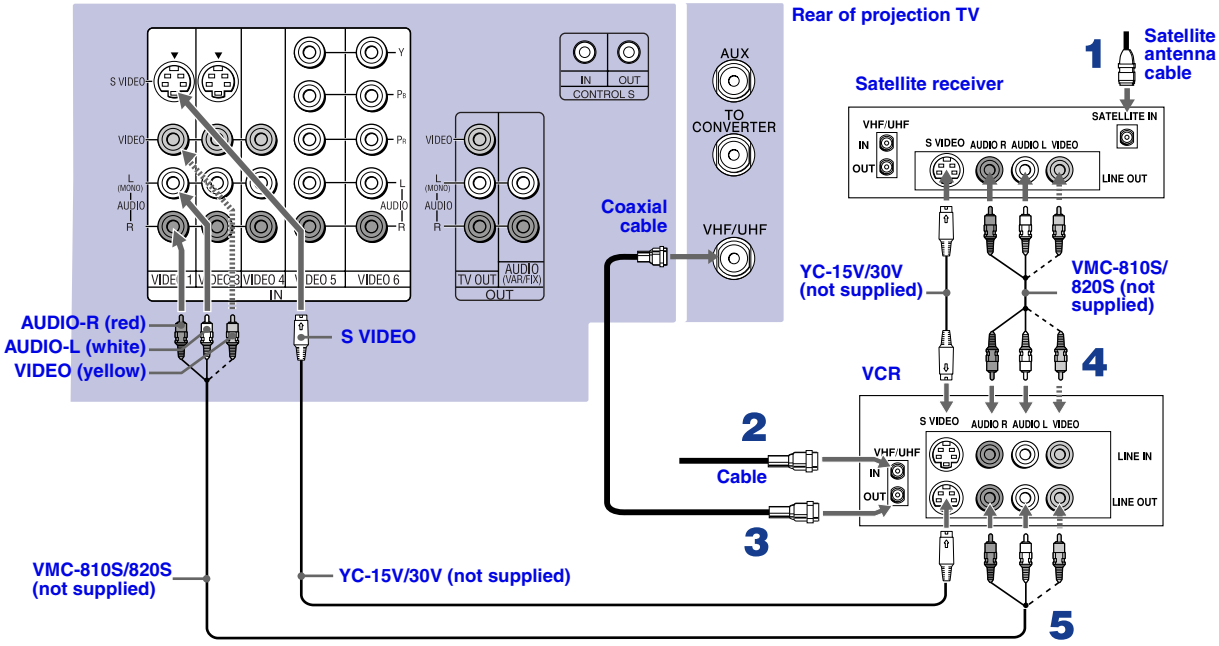
✍ If your satellite receiver is not equipped with S VIDEO, use a VIDEO cable (yellow) instead of the S VIDEO cable.



Connecting a Satellite Receiver with a VCR

Disconnect all power sources before making any connections.

1. Connect the satellite antenna cable to the satellite receiver's SATELLITE IN jack.
2. Connect the CATV cable to the VCR's VHF/UHF IN jack.
3. Using a coaxial cable, connect the VCR's OUT jack to the projection TV's VHF/UHF jack.
4. Using AUDIO and S VIDEO cables, connect the satellite receiver's AUDIO and S VIDEO OUT jacks to the VCR's AUDIO and S VIDEO IN jacks.
5. Using AUDIO and S VIDEO cables, connect the VCR's AUDIO and S VIDEO OUT jacks to the TV's AUDIO and S VIDEO IN jacks.



✍ Be sure your VCR's video input is set correctly. Consult your VCR's operating manual for instructions.

✍ Use TV/VIDEO to select
- VIDEO 1 to watch satellite TV or the VCR (your VCR must be turned on).
- VHF/UHF to watch cable TV.

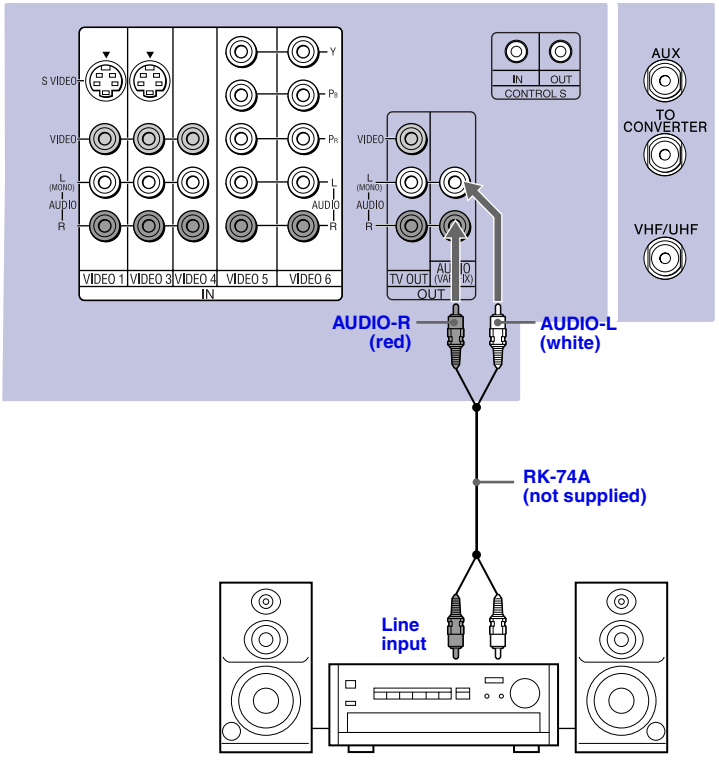
✍ If your VCR or satellite receiver is not equipped with S VIDEO, use a VIDEO cable (yellow) instead of the S VIDEO cable.

Connecting an Audio Receiver

Disconnect all power sources before making any connections.

Using audio cables, connect the projection TV's AUDIO OUT (VAR/FIX) jacks to the audio receiver's audio LINE IN jacks.

Rear of projection TV



Connecting a DVD Player with Component Video Connectors

This is the preferred hookup to use if:

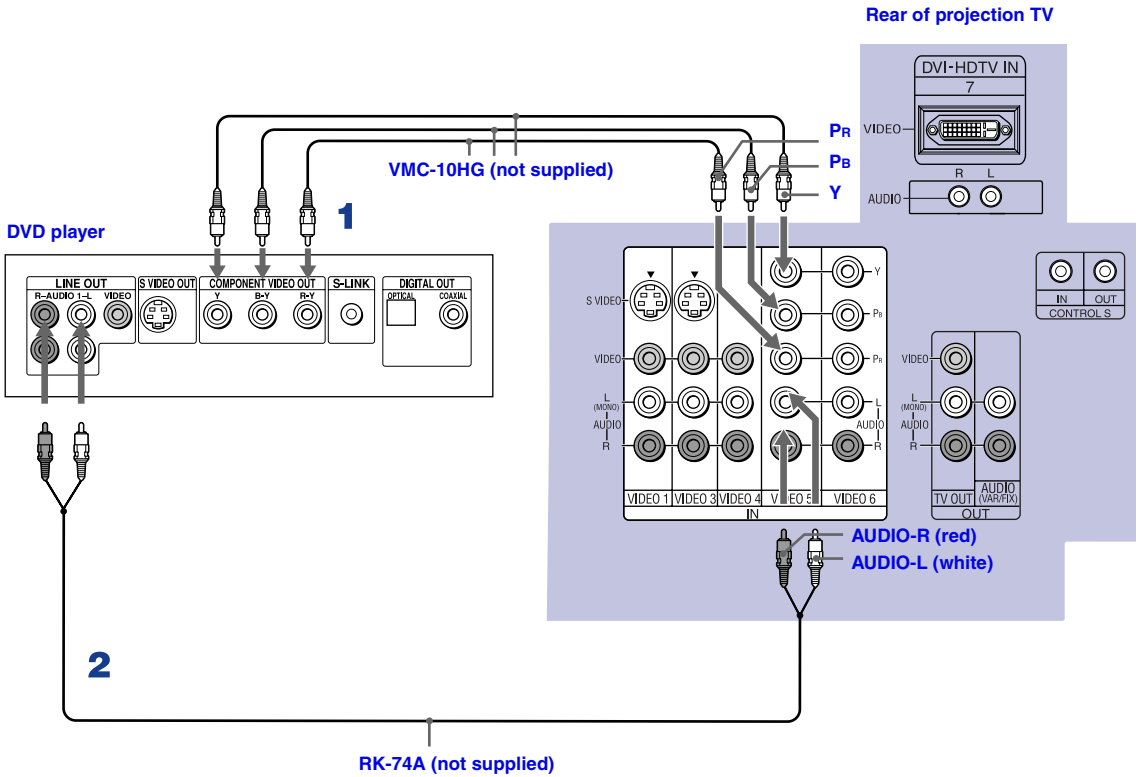
- ❑ Your DVD player has component (Y, B-Y, R-Y) jacks.

Disconnect all power sources before making any connections.

1 Using three separate component video cables, connect the DVD player's Y, B-Y and R-Y jacks to the Y, PB and PR jacks on the projection TV. Use the VIDEO IN 5 or 6 connections.

✍ The Y, B-Y and R-Y jacks on your DVD player are sometimes labeled Y, CB and CR, or Y, PB and PR. If so, connect the cables to like colors.

2 Using an audio cable, connect the DVD player's Audio OUT jacks to the projection TV's AUDIO IN jacks. Be sure to use the same row of inputs that you used for the video connection (VIDEO IN 5 or 6).



Connecting a DVD Player with A/V Connectors

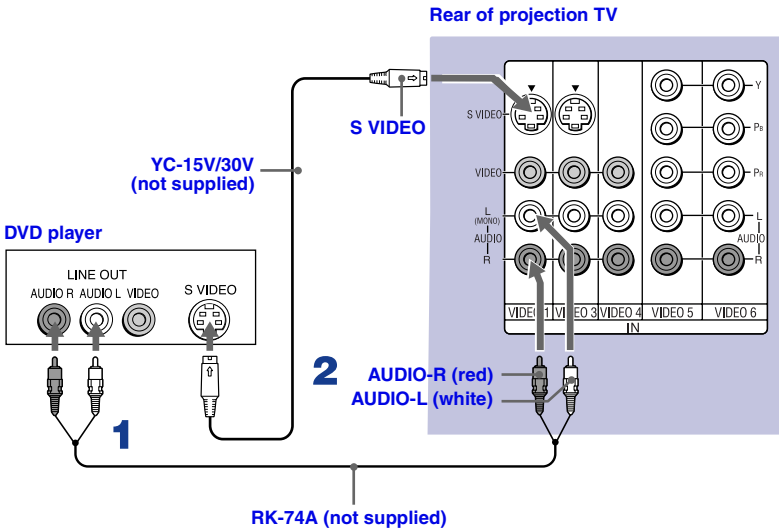
Use this hookup if:

- Your DVD player does not have component (Y, PB, PR) jacks.

✍ If your DVD player has video component output connectors: for best picture quality use the connection described on page 26.

Disconnect all power sources before making any connections.

1. Using audio cables, connect the DVD player's Audio OUT jacks to the projection TV's AUDIO IN jacks.
2. Using an S VIDEO cable, connect the DVD player's S VIDEO jack to the projection TV's S VIDEO jack.



✍ Use TV/VIDEO on the remote control to switch between the VCR, DVD player and cable TV inputs.

✍ If your VCR is not equipped with S VIDEO, use a VIDEO cable (yellow) instead of the S VIDEO cable.

Connecting a Digital TV Receiver

Be sure to read the Set-top box manual.

Some Digital TV Receivers are equipped with a DVI connection. Refer to your Digital TV Receiver manual for setup instructions using this connection.

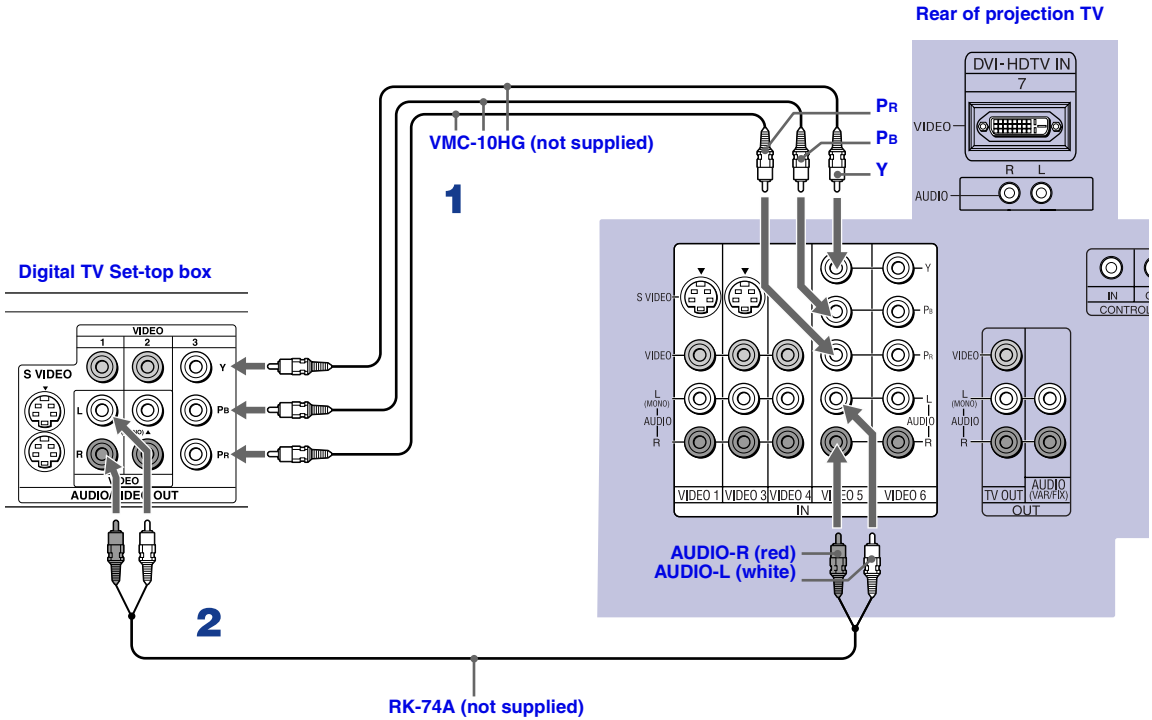
Disconnect all power sources before making any connections.

1 Using three separate component video cables, connect the Digital TV Set-top box's Y, PB and PR jacks to the projection TV.

✍ The Y, PB and PR jacks do not provide audio, so audio cables must be connected to provide sound.

✍ Component video connection is necessary to view 480p, 720p, and 1080i formats. You may also use the S VIDEO or Composite Video connections, however, component video (Y, PB, PR) will provide the best picture quality for all format types.

2 Using an audio cable, connect the Digital TV Set-top box's Audio OUT jacks to the projection TV's AUDIO IN jacks.



✍ You cannot record the signal from any equipment connected into the Y, PB and PR connectors.

✍ This projection TV is not compatible with digital TV receivers configured with RGB or VGA output connectors.

✍ The DVI connection is compliant with the EIA-861 standard and is not intended for use with personal computers.

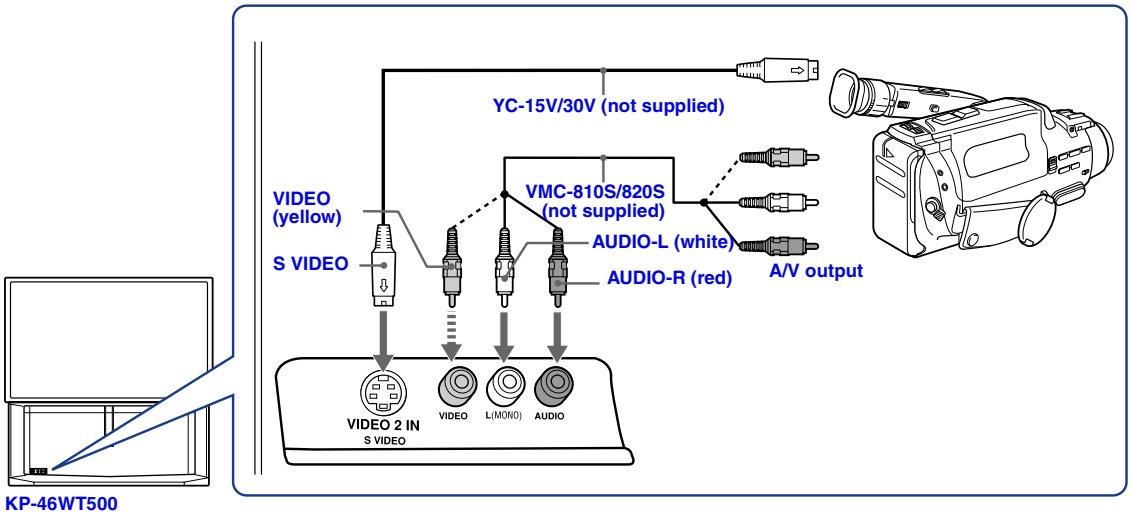
Connecting a Camcorder

For easy connection of the camcorder, the projection TV has front Audio and Video inputs (shown below). However, if you prefer, you can also connect the camcorder to the projection TV's rear Audio and Video IN jacks.

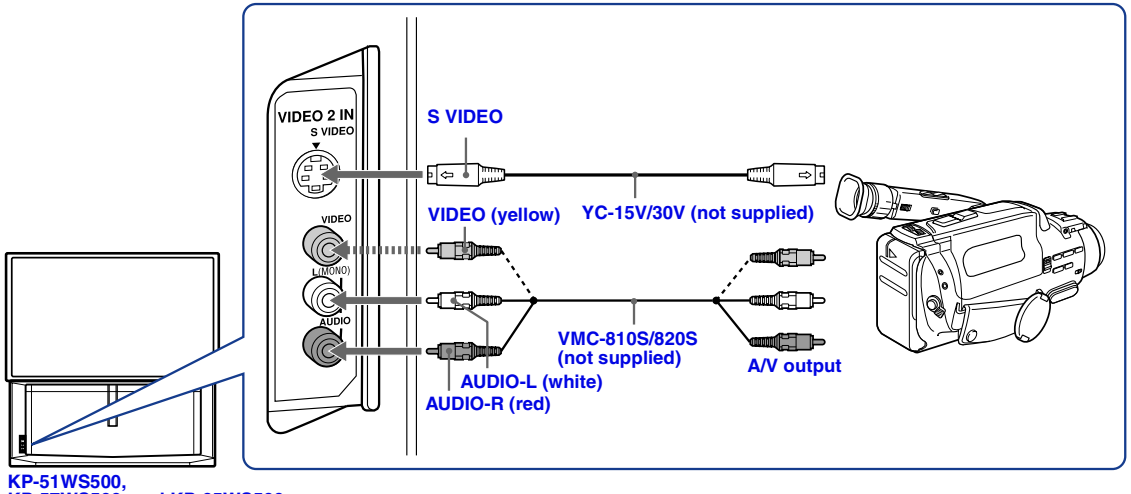
Using AUDIO and S VIDEO cables, connect the camcorder's Audio and S VIDEO OUT jacks to the projection TV's AUDIO and S VIDEO IN jacks.

✍ If you have a mono camcorder, connect its left audio output to the projection TV's AUDIO L (MONO) jack.

✍ If your camcorder is not equipped with S VIDEO, use a VIDEO cable (yellow) instead of the S VIDEO cable.



KP-46WT500



KP-51WS500,
KP-57WS500, and KP-65WS500

Connecting an AV Receiver

For greater control of all audio and video equipment, connect an AV receiver.

✍ Change “Video Label” for the VIDEO 1 input to “Receiver” (see page 59).

Disconnect all power sources before making any connections.

1 Connect the coaxial cable from the incoming cable connection or antenna to IN on the VCR.

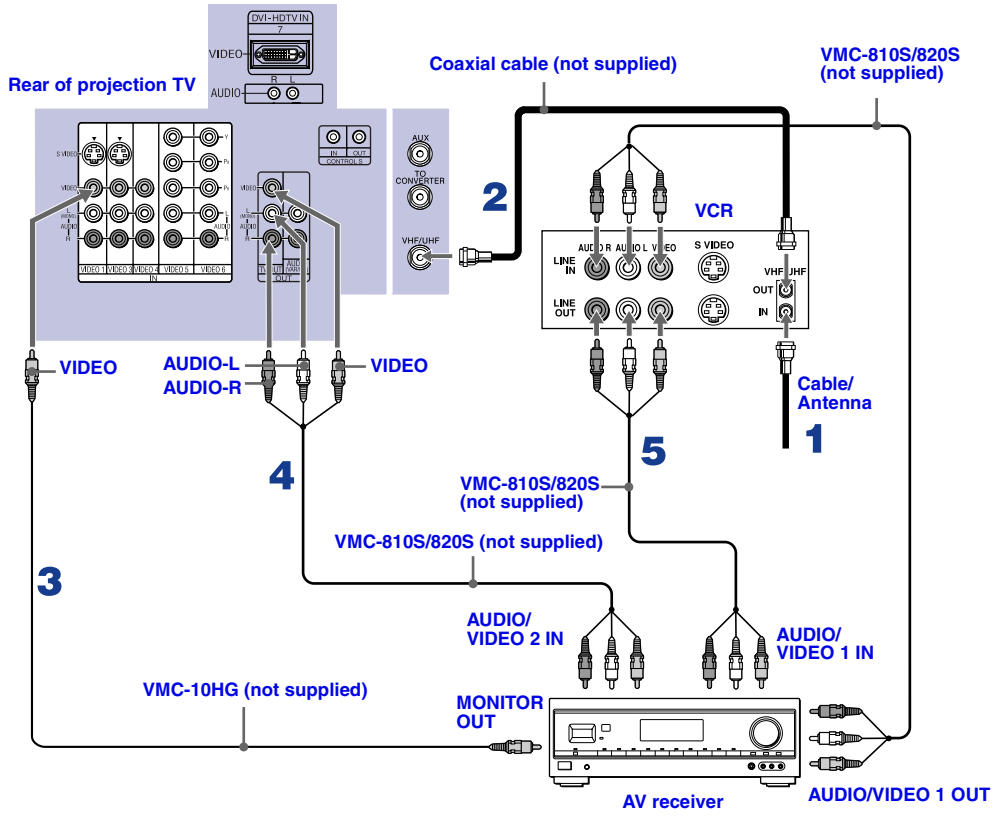
2 Using a coaxial cable, connect OUT on the VCR to VHF/UHF on the projection TV.

3 Using a VIDEO cable, connect VIDEO of VIDEO 1 IN on the projection TV to MONITOR OUT on the AV receiver.

4 Using an AUDIO/VIDEO cable, connect TV OUT on the projection TV to AUDIO/VIDEO 2 IN on the AV receiver.

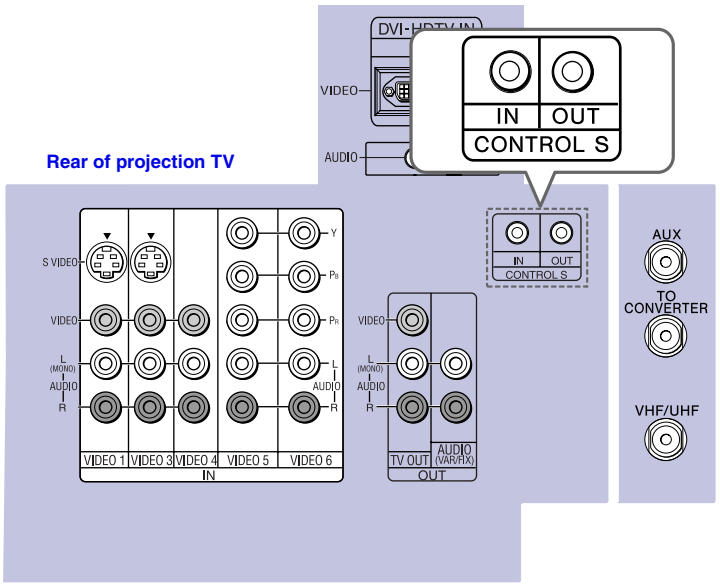
5 Using an AUDIO/VIDEO cable, connect the video equipment to the AV receiver.

6 Select the Setup menu and set “Video Label” to “Receiver” to fix your TV’s input to AV receiver (see “Video Label” on page 59).



Using the CONTROL S Feature

CONTROL S allows you to control your projection TV system and other Sony equipment with one remote control. In addition to allowing you to control multiple devices with one remote control, the CONTROL S feature allows you to always point your remote control at your projection TV, instead of having to point it at the other equipment, which might be hidden or out of direct line of sight.



Setting Up the Projection TV Automatically

After you finish connecting your projection TV, you can run Auto Setup to set up your channels. The Auto Setup screen appears when you turn your projection TV on for the first time after installing it. If you do not want to set up the channels at this time, you can do it later by using the Auto Program feature in the Channel menu (see page 54).

✍ The Auto Setup feature does not apply for installations that use a cable box for all channel selection.

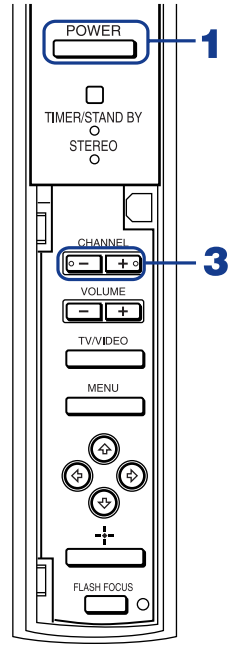
Using Auto Setup

1 Press POWER on the front panel of your projection TV or on the remote control to turn on the projection TV.

2 Press the TV (FUNCTION) button on your remote control. Red light will briefly appear.

3 Press CH+ on your projection TV to run Auto Setup, or press CH– to exit. If you use the channel buttons on your remote control, be sure to use the main set of buttons (CH +/–).

Projection TV front panel



✍ You can run Auto Program by selecting it in the Channel menu, as described on page 54.

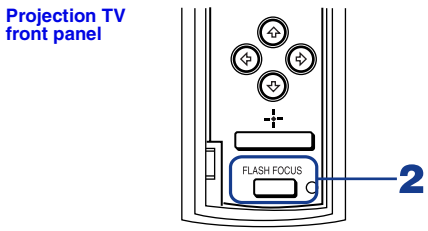
Adjusting the Convergence Automatically – FLASH FOCUS™ –

The projection tube image appears on the screen in three colors (red, green and blue). If they do not converge, the color is poor and the picture blurs.

Before you use your projection TV, be sure to adjust the convergence.

The FLASH FOCUS feature allows you to adjust the convergence automatically.

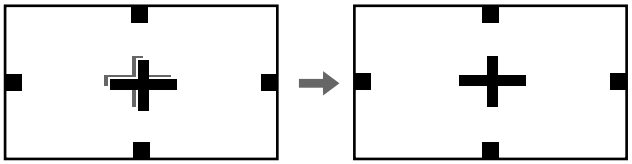
✍ It is recommended to perform FLASH FOCUS about 30 minutes after the projection TV is first turned on.



1 Receive a TV or cable TV program.

2 Press FLASH FOCUS.

The cross pattern shown below appears and FLASH FOCUS begins to work. The adjustment is completed when the cross pattern becomes white and you are returned to the program you were watching.



✍ You cannot perform any other functions until FLASH FOCUS has completed its cycle.

✍ If you perform any other operation while FLASH FOCUS is in progress, FLASH FOCUS operation is canceled.

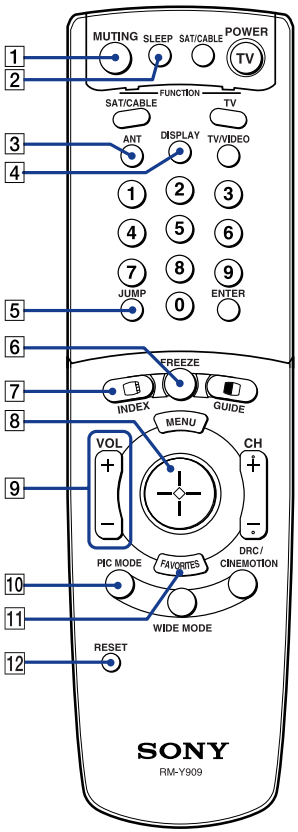
✍ Unshielded speakers or other metallic objects can cause picture distortion if placed close to the projection TV.

Using the Features

Using the Remote Control

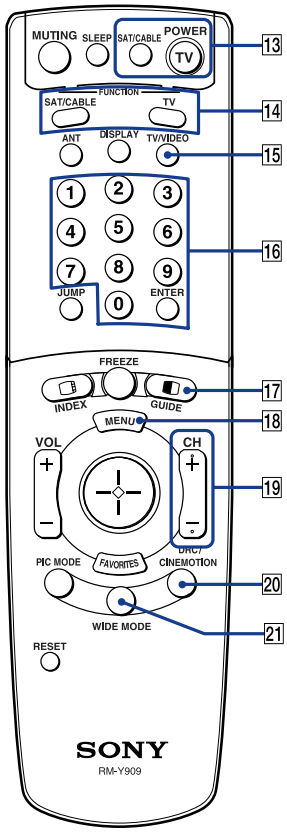
The following table describes the buttons on the remote control that are for more advanced functions.

Button Descriptions



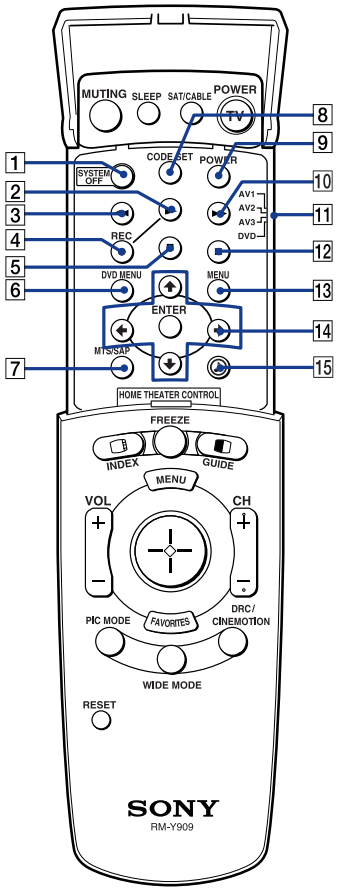
Outside Panel

Button	Description
1 MUTING	Press to mute the sound. Press again or press VOL + to restore the sound.
2 SLEEP	Press repeatedly until the projection TV displays the time in minutes (15, 30, 45, 60, or 90) that you want the projection TV to remain on before shutting off automatically. Cancel by pressing until SLEEP OFF appears or turning the power off. While the Sleep feature is set, press once to view the remaining time.
3 ANT	Changes between the VHF/UHF input and the AUX input.
4 DISPLAY	Press once to display the current time and channel label (if set) and channel number. Press again to turn Display off. See page 57 for details on setting the time.
5 JUMP	Press to jump back and forth between two channels. The projection TV alternates between the current channel and the last channel that was selected.
6 FREEZE	Freezes the window picture. Press again to restore the picture.
7 INDEX	Press to enter the Scrolling Channel Index mode. You can view and select from all receivable channels scrolling on the screen without leaving the current one.
8	The joystick allows for movement of the on-screen cursor. Pressing down on the center of the joystick selects the item.
9 VOL +/–	Adjusts the volume.
10 PIC MODE	Press repeatedly to step through the available video picture modes: Vivid, Standard, Movie and Pro. Also available in the Video menu. For details, see “Selecting Video Options” on page 49.
11 FAVORITES	Displays the Favorite Channels list. For details, see “Using Favorite Channels” on page 40.
12 RESET	Press when in a menu to reset the settings to the factory defaults.



Button	Description
13 POWER buttons (GREEN)	Turn on and off the projection TV and other audio/video equipment you have programmed into the remote control. For instructions, see “Programming the Remote Control” on page 68.
14 FUNCTION buttons	Select the equipment (TV, SAT/CABLE) that you want to operate. The indicator lights up momentarily when pushed to show which device the remote control is operating.
15 TV/VIDEO	Cycles through the video equipment connected to your projection TV’s video inputs: TV, VIDEO 1, VIDEO 2, VIDEO 3, VIDEO 4, VIDEO 5, VIDEO 6 and VIDEO 7.
16 0 – 9 and ENTER	Press 0 - 9 to select a channel, the channel changes after 2 seconds. Press ENTER to select immediately.
17	Turns on/off Twin View. For details, see “Using Twin View™” on page 41.
GUIDE	Displays the program guide of your satellite.
18 MENU	Press to display the projection TV on-screen menu. Press again to exit from the menu.
19 CH +/–	Scan through channels.
20 DRC/ CINEMOTION	Press repeatedly to step through the available high-resolution picture modes: Interlaced, Progressive and CineMotion. For details, see “Using the Video Menu” on page 49.
21 WIDE MODE	Press to step through the wide screen modes: Wide Zoom, Normal, Full and Zoom. For details, see “Using Wide Screen Mode” on page 47.

To scan rapidly through the channels, press and hold down CH+ or CH–.



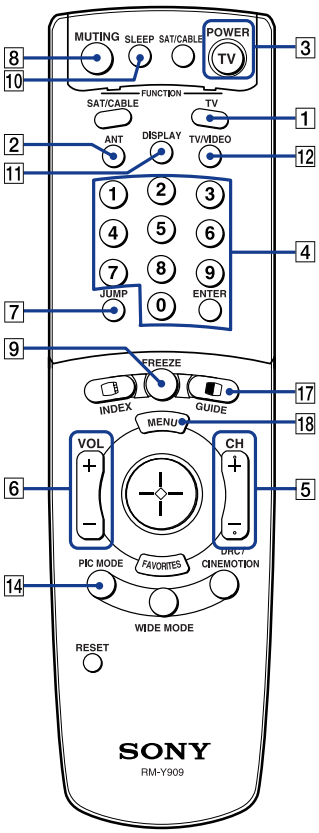
Inside Panel

	Button	Description
1	SYSTEM OFF	Press to turn off the projection TV and all equipment connected with S-Link.
2	►	Play
3	◄◄	Rewind
4	REC	Record
5	■	Stop
6	DVD MENU	Displays the DVD menu.
7	MTS/SAP	Press to scroll through the Multi-channel TV Sound (MTS) options: Stereo, Auto SAP, and Mono.
8	CODE SET	Used for programming the remote control to operate non-Sony video equipment. For details, see “Programming the Remote Control” on page 68.
9	POWER	Press to turn on the DVD/VCR player you have programmed into the remote control. For instructions, see “Programming the Remote Control” on page 68.
10	►►	Fast-forward
11	AV1 AV2 AV3 DVD	Use to switch control for connected video equipment. You can program one video source for each switch position. For details, see “Programming the Remote Control” on page 68.
12	❚❚	Pause (Press again to resume normal playback)
13	MENU	Displays the Video equipment menu.
14	↑, ↓, ←, →, and ENTER	Use to operate the DVD menu.
15	♪	Press to select an audio option: Steady Sound ON or OFF.

Watching the TV

Many TV features can be accessed directly through the remote control. The following will explain the function of some of the buttons found on your remote control.

Buttons for Projection TV Operations



1 TV (FUNCTION)

Activates the remote control for use with the projection TV.

2 ANT— (AUX input)

Press to change between the VHF/UHF input and the AUX input.

3 TV (POWER)

Turns the projection TV on and off. If a video input indication (e.g., VIDEO 1, VIDEO 2) appears on the screen, press TV/VIDEO or CH +/ – until a channel number appears.

4 0-9 and ENTER

Use for direct channel selection. Press 0-9 to select a channel (for example, to select channel 10, press 1 and 0). The channel will change after 2 seconds, or you can press ENTER for immediate selection.

5 CH +/–

Press to scan through the channels (+ up or – down).

6 VOL +/–

Press to adjust the volume (+ up or – down).

7 JUMP

Press to alternate or jump back and forth between two channels. The projection TV will jump between the current channel and the last channel selected.

8 MUTING

Press to mute the sound. “MUTING” will appear on the screen and will dim three seconds later. To restore the sound, press again or press VOL +.

9 FREEZE — (yellow labeled button)

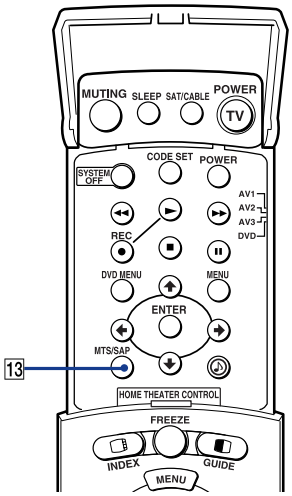
This is useful when you need to copy down information that appears on the TV’s screen (see “Using the Freeze Function” on page 44).

10 SLEEP

Press repeatedly until the projection TV displays the approximate time in minutes (15, 30, 45, 60, or 90) that you want the projection TV to remain on before shutting off automatically.

Cancel by pressing SLEEP until “SLEEP OFF” appears or turning the power off.

(Continued)



11 DISPLAY

Press to display the channel number, current time and channel label (if set).

To turn the display off, press DISPLAY again.

12 TV/VIDEO

Press repeatedly to scroll through available video inputs: TV, VIDEO 1, VIDEO 2, VIDEO 3, VIDEO 4, VIDEO 5 VIDEO 6, and VIDEO 7.

If you select Skip as a Video Label in the Setup menu, your projection TV will skip the video input you selected (see “Video Label” on page 59).

13 MTS/SAP

Press to scroll through the Multi-channel TV Sound (MTS) options (see “MTS” on page 51).

14 PIC MODE

Press PIC MODE repeatedly to directly choose one of four different video modes that best suits the program you are watching.

Vivid: Select for enhanced picture contrast and sharpness.

Standard: Select to display a standard picture for normal viewing environments.

Movie: Select to display a finely detailed picture for low light environments.

Pro (Professional): Select to display a picture with minimum enhancements.

When you select each mode, you can also adjust the picture quality (such as Brightness, Color, etc.) to suit your taste. For details, see “Mode” on page 49.

Watching the Digital TV

When you have connected the DTV receiver, you can enjoy digital TV programs. This projection TV is capable of receiving the 1080i, 720p, 480p and 480i digital TV formats.

✍ This projection TV is not capable of displaying a native 720p format signal. When a 720p format signal is received, it is converted into a 480p format signal.

To view a digital TV program

1. Connect the DTV receiver to VIDEO 5, 6 or 7 IN on the projection TV. (for details, see page 28)
2. Press TV/VIDEO to select VIDEO 5, 6 or 7.
3. Select a digital channel on the DTV receiver. For details, see the Operating Manual of the DTV receiver.
4. Adjust the volume of the projection TV as necessary.

Using Favorite Channels

The Favorite Channel feature lets you select programs from a list of favorite channels that you preset.

To display a list of your favorite channels:

✍ Your Favorite Channel options can be set automatically or manually. The factory setting for Favorite Channel is Auto.
When Favorite Channel is set to Auto, the last eight channels selected with 0-9 buttons will be set as Favorite Channel options. If you want to input your own selections as Favorite Channel settings, see “Favorite Channel” on page 53.

1 Press FAVORITES.

The Favorite Channel options appear.

2 Move the joystick up or down to highlight the channel you want to watch. The program of that channel appears in the preview window. Press ⊕ to select.

Using Twin View™

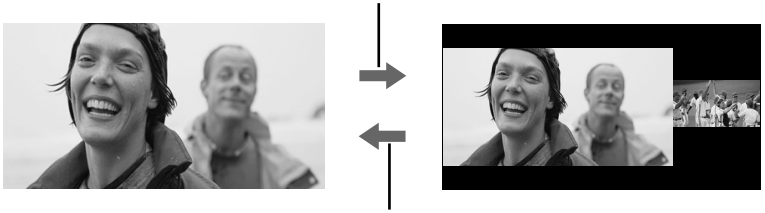
Twin View enables you to watch two programs at the same time. You can also change the size of both the left and right pictures.

Activating Twin Pictures

To display twin pictures

1 Make sure your projection TV is tuned to a working channel.

2 Press ◑.



To cancel twin pictures

❑ Press ◑ again (or press ⊕).

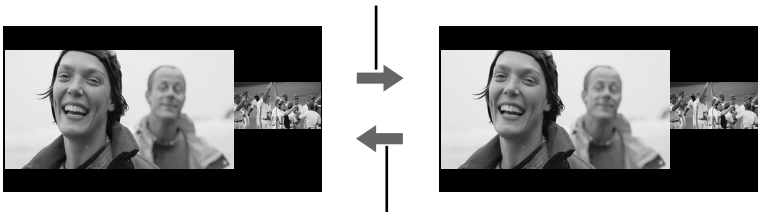
Activating the Picture

Although two pictures appear on the screen at the same time, only one picture is active. For an active picture, you can:

- ❑ Change channels.
- ❑ Adjust the volume.
- ❑ Switch the input sources from VHF/UHF to cable by pressing ANT or TV/VIDEO to switch the video input.
  When the picture on the right is activated, the input sources cannot be switched to VIDEO 5, 6, 7, or AUX by pressing ANT.
- ❑ Change the picture size by pressing the joystick up or down.

To activate the right picture

❑ Move the joystick to the right.



To activate the left picture

❑ Move the joystick to the left.

(Continued)

✍ Factors Affecting Twin View:

- If you use a cable box to view all channels, the same channel appears in both windows because the cable box unscrambles only one channel at a time.
- If you use a cable box, you can view the cable box output in one window and view a different source (such as a VCR or DVD player) in the second window by using the TV/VIDEO button.
- Sources connected to the AUX, VIDEO 5, VIDEO 6, and VIDEO 7 inputs display in the left window, but not the right.
- If you are viewing a 4:3 source and a 16:9 enhanced source (such as a DVD) side by side, the 4:3 source appears larger.
- Twin View does not display channels that are blocked by Parental settings (page 60).

✍ The active picture is highlighted in cyan.

Changing the Picture Size

The zoom feature lets you change the size of the left and right pictures.

To enlarge the left picture (reduce the right)

1. Move the joystick left to activate the left picture (if not already activated).
2. Move the joystick up to enlarge the picture and move the joystick down to reduce the picture.

To enlarge the right picture (reduce the left)

1. Move the joystick right to activate the right picture (if not already activated).
2. Move the joystick up to enlarge the picture and move the joystick down to reduce the picture.

✍ When you adjust the twin screen sizes, the projection TV memorizes the change. The next time you use the Twin View function, the memorized sizes appear.

Using the Freeze Function

The FREEZE button allows you to temporarily capture a program's picture. You can use this feature to write down information such as phone numbers, recipes, etc.

To use the Freeze function

1. When the program information you want to capture is displayed, press FREEZE.
2. The projection TV switches to Twin View mode and displays the "frozen" picture on the right, while the current program continues on the left.

3. To cancel and return to normal viewing, press FREEZE.

✍ Freeze feature is not available if you are already in Twin View™ or Index mode.

Using Scrolling Channel Index

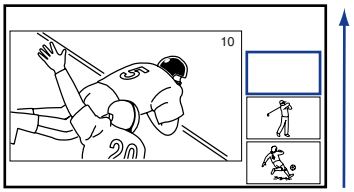
Scrolling Channel Index allows you to view and select from all receivable channels scrolling on the screen without leaving the current channel.

✍ Scrolling Channel Index will not function when parental Lock is activated.

To use the Scrolling Channel Index function

1 Press ▭.

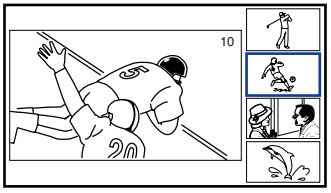
The current channel will be reduced in size and displayed on the left in normal motion picture format. The first channel is briefly displayed on the bottom-right side of the screen, then frozen. It scrolls up and the next channel appears on the bottom-right, and the process is repeated with the other channels.



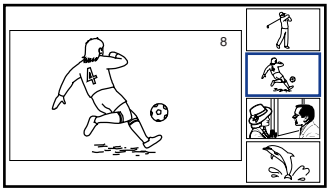
2 Move the joystick up and down so that the channel you wish to view is displayed in the cyan frame, and press ⊕.

To return to scrolling, move the joystick up and down again.

To change the direction of scrolling, move the joystick up or down once.
To increase scrolling speed, hold the joystick up or down.



3 To enlarge the selected channel into the left frame, press ⊕ again. The selected channel will be displayed in normal motion picture, and the sound also switches to this channel.



(Continued)

4 Press ▢.

The selected channel will be enlarged for normal viewing.

To cancel Scrolling Channel Index

Press ▢ again to resume normal viewing.

- ✍ Sound will only be heard from the center picture.
- ✍ If one of the pictures received through Scrolling Channel Index is snowy, the entire screen may become unstable. In this case, erase the snowy channel. (see “Channel Skip/Add” on page 54)
- ✍ If you leave the Scrolling Channel Index screen displayed for an hour without any additional operation, Scrolling Channel Index is canceled and the normal picture reappears.
- ✍ The Scrolling Channel Index cannot be used in combination with set-top boxes, DBS receivers, or cable boxes.
- ✍ Scrolling Index feature does not function if you use a cable box to view all channels.
- ✍ Sources connected to the AUX, VIDEO 5, VIDEO 6, and VIDEO 7 inputs display in the left window, but not the right windows.
- ✍ Scrolling Index does not display channels that are blocked by Parental settings (page 60).

Using Wide Screen Mode

Wide Screen Mode lets you watch 4:3 normal broadcasts in several Wide Screen modes (16:9 aspect ratio).

❑ Press WIDE MODE repeatedly to toggle through the following Wide Mode settings.

Wide Zoom

Wide Zoom enlarges the 4:3 picture, while the upper and lower parts of the picture are condensed to fit the 16:9 screen.

Normal

Normal returns the 4:3 picture to its original size.

Full

Full Mode stretches the 4:3 picture horizontally only, to fill the 16:9 screen.

Zoom

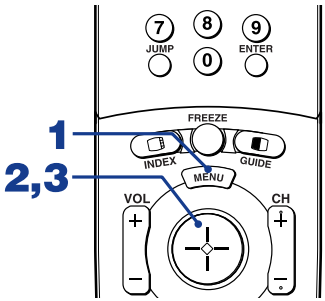
Zoom Mode enlarges the 4:3 picture horizontally and vertically to an equal aspect ratio that fills the 16:9 screen. Useful for watching Letterbox movies.

You can also access the Wide Mode settings in the Wide menu. For details, see page 55.

When you change channels or inputs, the Wide Mode settings revert to Wide Zoom (or the 4:3 Default setting in the Wide menu). To retain the current Wide Mode setting as channels and inputs are changed, set 4:3 Default to Off. For details, see page 55.

Using the Menus

Overview



Opening and choosing a menu:

1. Press MENU to display the menu screen.
2. Move the joystick to the desired menu icon and press ⊕ to select it.
3. Use the joystick to scroll through the features.
4. See the specific menu page for instructions on moving through the menu.

The menu gives you access to the following features:

Menu Icon	Description	Page
Video	Allows you to make adjustments to your picture settings. It also allows you to customize the Picture Mode based on the type of program you are viewing.	49
Audio	Offers enhanced audio options such as listening to second audio programming (SAP), or customizing the Effect of the sound on your projection TV.	51
Channel	Allows you to set up a Favorite Channel list, run the Auto Program function, and more.	53
Wide	Allows you to set the wide screen mode, adjust the vertical center in wide mode, and set the 4:3 Default mode.	55
Timer	Lets you set the clock on your projection TV and allows you to program your projection TV for scheduled viewing using the Timers.	57
Setup	Provides several options for setting up your channels, labeling your Video inputs, and selecting the language of the on-screen menus.	58

To end a menu session:

Press MENU again.

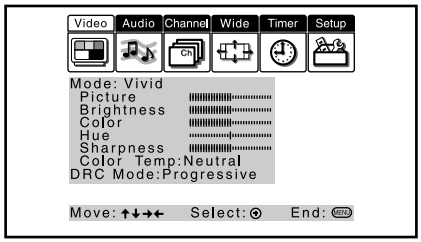
To end one menu session and move to another:

Press the joystick ← to return to the menu icons. Move the joystick ← or → to choose the next menu icon and press ⊕ to select it.

Using the Video Menu

To select the Video Menu

1. Press MENU.
2. Move the joystick to the Video icon and press .
3. Use the joystick to scroll through the features.
4. Press to select a feature. That feature's adjustment appears.
5. Use the joystick to make the desired adjustments.
6. Press to select/set.
7. Press MENU to exit the menu screen.



To restore the factory default settings for Picture, Brightness, Color, Hue, Sharpness and Color Temp

❑ Press RESET on the remote control when in the Video menu.

Selecting Video Options

To quickly and easily change from one Video Mode to another, use the PIC MODE on the remote control.

The Video menu includes the following options.

Option	*Description*	
Mode *Customized picture viewing*	Vivid	Select for enhanced picture contrast and sharpness.
	Standard	Recommended for Normal viewing conditions.
	Movie	Select for soft, film like, picture.
	Pro	Select for professional monitor like appearance.
	✍ You can alter the Video menu settings (Picture, Brightness, Color, etc.) for each Mode.	
Picture	Adjust to increase picture contrast and deepen the color or decrease picture contrast and soften the color.	
Brightness	Adjust to brighten or darken the picture.	
Color	Adjust to increase or decrease color intensity.	
Hue	Adjust to increase or decrease the green tones.	
Sharpness	Adjust to sharpen or soften the picture.	
Color Temp *White intensity adjustment*	Choose from three color temperatures:	
	Cool	Select to give the white colors a blue tint.
	Neutral	Select to give the white colors a neutral tint.
	Warm	Select to give the white colors a red tint (NTSC-Standard).

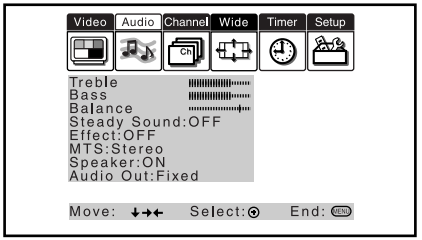
(Continued)

Option	Description	
DRC Mode *Digital Reality Creation*	Creates a high-resolution picture with 4x density, for high quality sources (i.e., DVD player, Satellite receiver).	
	Interlaced	Recommended for moving pictures.
	Progressive	Recommended for still images and text.
	CineMotion	Recommended for 24 frame-per-second films.

Using the Audio Menu

To select the Audio Menu

1. Press MENU.
2. Move the joystick to the Audio icon and press ⊕.
3. Use the joystick to scroll through the options.
4. Press ⊕ to select an option. That option's settings appear.
5. Use the joystick to scroll through the settings.
6. Press ⊕ to select the desired setting.
7. Press MENU to exit the menu screen.



To restore the factory default settings for Treble, Bass and Balance

❑ Press RESET on the remote control when in the Audio menu.

Selecting Audio Options

The Audio menu includes the following options:

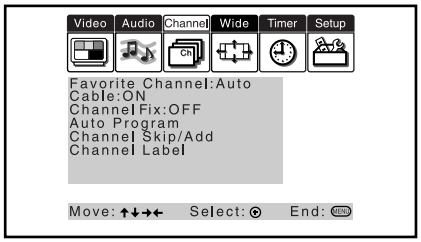
Option	Description	
Treble	Adjust to increase or decrease higher-pitched sounds.	
Bass	Adjust to increase or decrease lower-pitched sounds.	
Balance	Adjust to emphasize left or right speaker balance.	
Steady Sound	ON	Select to stabilize the volume.
	OFF	Select to turn off Steady Sound.
Effect	TruSurround	Select for surround sound (for stereo programs only).
	Simulated	Adds a surround-like effect to mono programs.
	OFF	Normal stereo or mono reception.
MTS *Enjoy stereo, bilingual and mono programs*	Stereo	Select for stereo reception when viewing a program broadcast in stereo.
	Auto-SAP	Select to automatically switch the projection TV to second audio programs when a signal is received. (If no SAP signal is present, the projection TV remains in Stereo mode.)
	Mono	Select for mono reception. (Use to reduce noise during weak stereo broadcasts.)

(Continued)

Option	Description	
Speaker	ON	Select to turn on the projection TV speakers.
	OFF	Select to turn off the projection TV speakers and listen to the projection TV's sound only through your external audio system speakers.
Audio Out *Easy control of volume adjustments*	Variable	The projection TV's speakers are turned off, but the volume output from your audio system can still be controlled by the projection TV's remote control.
	Fixed	The projection TV's speakers are turned off and the volume, bass and treble output of the projection TV is fixed. Use your audio receiver's volume control to adjust the volume through your audio system.

Using the Channel Menu

To select the Channel Menu



1. Press MENU.
2. Move the joystick to the Channel icon and press ⊕.
3. Use the joystick to scroll through the features.
4. Press ⊕ to select a feature. That feature's options appear.
5. Use the joystick to scroll through the options.
6. Press ⊕ to select the desired option.
7. Press MENU to exit the menu screen.

Selecting Channel Options

The Channel menu includes the following options:

Option	Description	
Favorite Channel	Auto	Select if you want Favorite Channel options to be set automatically to the last eight channels selected with the 0-9 buttons.
	Manual	Select if you want to input your own selections as Favorite Channel options. 1 Press ⊕ to select a favorite channel number. 2 Use the joystick to scroll through the channels until you find the channel you want to add to your favorites. 3 Press ⊕ to select it.
Cable	ON	Select if you are receiving cable channels with a CATV cable.
	OFF	Select if you are using an antenna.
	✍ You should run Auto Program after changing the Cable setting.	

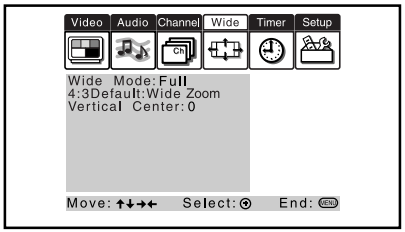
(Continued)

Option	Description	
Channel Fix *Useful when you have a cable box or satellite receiver connected*	2-6	"Fix" your projection TV's channel setting to 3 or 4 and use the cable box, VCR or satellite receiver to change channels. Select one of these settings if you have connected the device to the VHF/UHF jack.
	AUX 2-6	Same as 2-6, except you select one of these settings if you have connected the device to the AUX jack. (see page 15)
	VIDEO 1	Use when connecting a cable box to control external video sources. TV output should be connected through the cable box.
Auto Program	Automatically programs the projection TV for all receivable channels.	
Channel Skip/Add	Removes and adds viewable channels. **1** Use the joystick to scroll through the channels until you find the channel you want to skip/add. **2** Press ⊕ to select it. **3** Press the joystick up or down to toggle between "Add" and "Skip." **4** Press ⊕ to select.	
Channel Label	Label up to 20 channels with their station call letters.	

Using the Wide Menu

To select the Wide menu

1. Press MENU.
2. Use the joystick to move to the Wide icon and press .
3. Move the joystick to scroll through the features.
4. Press to select a feature. That feature's options appear.
5. Use the joystick to scroll through the options.
6. Press to select the desired option.
7. Press MENU to exit the menu screen.



Selecting Wide Options

To change from one Wide Mode to another, use the WIDE MODE button on the remote control.

Wide Mode is unavailable while in Twin View, Index or Freeze mode.

The 4:3 Default functions only when the projection TV receives 480i signals.

The Wide menu includes the following options:

Option	Description	
Wide Mode *Select a Wide Mode to use for 4:3 sources.*	Wide Zoom	Select to enlarge the 4:3 picture, while the upper and lower parts of the picture are condensed to fit the wide screen.
	Normal	Select to return the 4:3 picture to normal mode.
	Full	Select to enlarge the 4:3 picture horizontally only, to fill the wide screen.
	Zoom	Select to enlarge the 4:3 picture horizontally and vertically to an equal aspect ratio that fills the wide screen.
4:3 Default *Select the default Screen Mode to use for 4:3 sources.*	Wide Zoom	Select to enlarge the 4:3 picture, while the upper and lower parts of the picture are condensed to fit the wide screen.
	Normal	Select to return the 4:3 picture to normal mode.
	Full	Select to enlarge the 4:3 picture horizontally only, to fill the wide screen.
	Zoom	Select to enlarge the 4:3 picture horizontally and vertically to an equal aspect ratio that fills the wide screen.
	Off	Select to continue using the current Wide Mode setting when the channel or input is changed.

(Continued)

If 4:3 Default is set to anything but Off, the Wide Mode setting changes only for the current channel. When you change channels (or inputs), Wide Mode is automatically replaced with the 4:3 Default setting. To retain the current Wide Mode setting as channels and inputs are changed, set 4:3 Default to Off.

Option	Description
Vertical Center	Allows you to move the position of the picture up and down in the window. (Available only in Wide Zoom and Zoom modes.) Move the joystick up or down to choose a position and press ⊕.

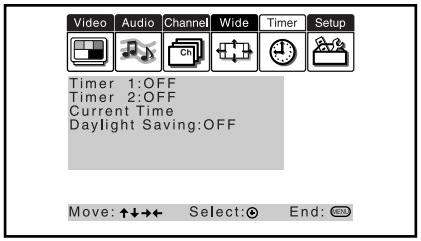
✍ Some wide-screen programs (particularly certain theatrical releases) will be shown in aspect ratios that require the display of black bands at the top and bottom of your 16:9 screen. For more details, check the documentation that came with your DVD, or contact your content provider.

Using the Timer Menu

To select the Timer menu

1 Press MENU.

2 Move the joystick to the Timer icon and press ⊕.



To set the Current Time

1 Use the joystick to select "Current Time", then press ⊕.

2 If it is currently Daylight Saving Time, be sure to set the mode to "ON" first.

3 Use the joystick to enter the correct time, then press ⊕.

4 Press MENU to exit the menu screen.

To set the Timer

Before setting the timer, be sure to set your projection TV's clock to the current time and Daylight Saving Mode.

1 Move the joystick to "Timer 1" or "Timer 2", then press ⊕.

2 Use the joystick to enter your day, time, channel, and timer duration preferences; then, press ⊕ to select each one.

3 Press MENU to exit the menu screen.

To reset the Clock or Timers

❑ Press RESET on the remote control after selecting that option in the Timer menu.

Selecting Timer Options

The Timer menu includes the following options:

Option	Description	
Timer 1 Timer 2	Program	Select to set the Timer by day, time, duration, and channel.
	OFF	Select to turn off the Timer. (Your previous settings will be saved.)
Current Time	Set the current time.	
Daylight Saving	ON	Select in the Spring to adjust the time during Daylight Saving Time.
	OFF	Select in the Fall to adjust the time at the end of Daylight Saving Time.

Using the Setup Menu

To select the Setup Menu

1. Press MENU.
2. Move the joystick to the Setup icon and press ⊕.
3. Use the joystick to scroll through the features.
4. Press ⊕ to select a feature. That feature's options appear.
5. Use the joystick to scroll through the options.
6. Press ⊕ to select the desired option.
7. Press MENU to exit the menu screen.

Selecting Setup Options

The Setup menu includes the following options:

Option	Description	
Parental Control	Allows you to set up the TV to block programs according to their content and rating levels. For details about setting, see "Using the Parent Menu" on page 60.	
Caption Vision	Allows you to select from three closed caption modes (for programs that are broadcast with closed captioning).	
	OFF	Turns off Caption Vision.
	CC1, CC2, CC3, CC4	Displays a printed version of the dialog or sound effects of a program. (Should be set to CC1 for most programs.)
	TEXT1, TEXT2, TEXT3, TEXT4	Displays network/station information presented using either half or the whole screen (if available). For closed captioning, set to CC1.
	XDS *(Extended Data Service)*	Displays a network name, program name, program length, and time of the show if the broadcaster offers this service.

Option	Description	
Video Label	Allows you to label the audio/video components you connected to the projection TV so you can identify them when using TV/VIDEO. When in the Setup menu's Video Label feature, use the joystick to highlight an input to label, then press ⊕ to select it. Use the joystick to scroll through the labels. Press ⊕ to select the component you connected to each of the input jacks on the back of your projection TV. Select "Skip" if you do not have a component connected to a particular set of input jacks.	
	VIDEO 1/2/3/4	VHS, DVD, Receiver, Satellite, Cable Box, 8 mm, DTV, Game, LD, Web, Beta, Skip
	VIDEO 5/6/7	DVD, Satellite, Cable Box, DTV, HD, Skip
	If you select "Skip", your projection TV skips this connection when you press TV/VIDEO.	
	✍ When you select "Receiver" on Video Label, your projection TV's input is fixed.	
Language	Select to display all on-screen menus in your language of choice: English, Español, Français.	

Using the Parent Menu

The Parent menu allows you to set up the TV to block programs according to their content and rating levels.

These ratings are assigned by a federal rating board. Not all programs are rated. Using the Parental Lock blocks programs with a specific rating, but it does not block an entire channel.

✍ Scrolling Channel Index will not function when Parental Lock is activated.

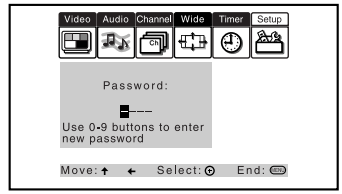
To select the rating

First, set a password, then select the country you reside in (U.S.A. or Canada) and your desired rating.

1 Press MENU.

2 Move the joystick to the Setup icon and press ⊕.

3 Make sure that “Parental Control” is selected, and press ⊕.



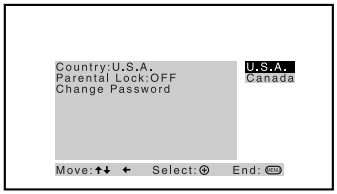
4 Use the 0-9 buttons on the remote control to enter your four-digit password.

5 Confirm your password by entering it again. Your password is stored and the Parent menu options appear.

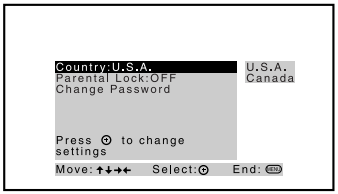
✍ You need the password entered here for any future access into the Parent menu. If you lose your password, see “Lost password” on page 74.

✍ If you want to change the password, see page 62.

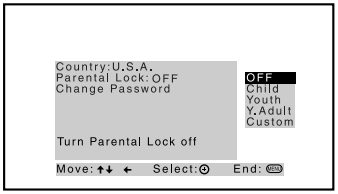
6 Make sure that “Country” is selected, and press ⊕.



7 Move the joystick up or down to select U.S.A. or Canada according to the country you reside in, and press ⊕.

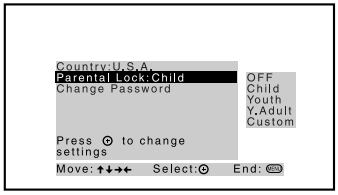


8 Move the joystick down to select “Parental Lock”, and press ⊕.



9 Move the joystick up or down to select a desired rating, and press ⊕.

If you select Child, Youth, Young Adult or Custom, the Parental Control is activated automatically.



If you want to select the ratings from Custom, see “Using Custom Rating Options” on page 63.

10 Press MENU to exit the menu screen.

The Parent menu includes the following options.

Option	Description	
Parental Lock *Turn ratings on/ off and select a rating system*	OFF	Parental lock is off. No programs are blocked from viewing.
	Child	Maximum ratings permitted are: ❑ US: TV-Y, TV-G, G ❑ Canada: TV-Y, C, G
	Youth	Maximum ratings permitted are: ❑ US: TV-PG, PG ❑ Canada: TV-PG, PG, 8 ans+
	Young Adult	Maximum ratings permitted are: ❑ US: TV-14, PG-13 ❑ Canada: TV-14, 14+, 13 ans+
	Custom	Select to set ratings manually. ❑ US: See page 66 for details. ❑ Canada: See page 67 for details.
Change Password	For changing your password. (see below)	

If you are not familiar with the Parental Guideline rating system, you should select Child, Youth, or Young Adult to help simplify the rating selection. To set more restrictive ratings, select Custom.

For descriptions of Child, Youth, and Young Adult ratings, see pages 66 and 67.

To deactivate the Parental Control feature

❑ Set Parental Lock to OFF when in the Parent menu.

To change the password

1. Select Change Password option when in the Parent menu using the joystick, and press ⊕.
2. Enter a new four-digit password using the 0-9 buttons.
3. Confirm the new password by entering it again.
4. Press MENU to exit the menu screen.

Viewing Blocked Programs

You can view a blocked program by entering the password.

1. Press ENTER when tuned to a blocked program.
2. Enter your password using the 0-9 buttons.

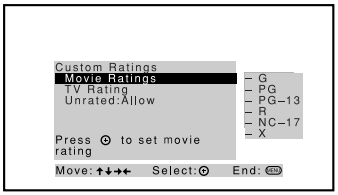
   Parental Control will be canceled temporarily until you turn your projection TV off.

Using Custom Rating Options

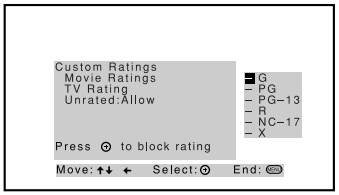
If you want to select the ratings to be blocked from Custom, follow the procedure below.

1 Perform the steps 1 to 8 in “To select the rating” on page 60 to display the Parental Lock options.

2 Move the joystick up or down to select “Custom,” and press ⊕.

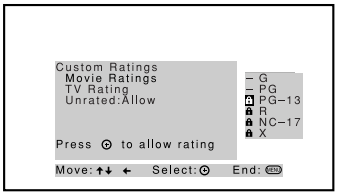


3 Make sure that “Movie Ratings” is selected, and press ⊕.



4 Move the joystick up or down to select the rating to be blocked, and press ⊕.

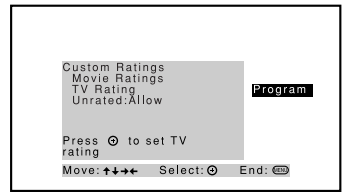
The 🔒 indicator automatically appears beside the selected rating and all “higher” ratings, indicating that the programs that match the ratings will be blocked.



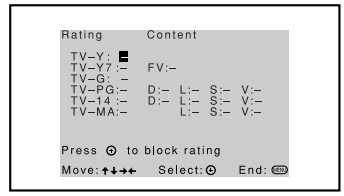
To unblock a rating, select it by moving the joystick up or down, then press ⊕. The indicator 🔒 changes into “-” and all “lower” ratings are unblocked.

(Continued)

5 Move the joystick left, then down, to select “TV Rating” or “Program,” and press ⊕.

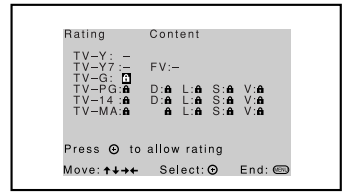


6 The “TV Rating” setting menu appears.



7 Move the joystick up or down to select the rating to be blocked, and press ⊕.

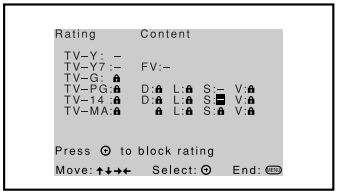
The 🔒 indicator automatically appears beside the selected rating and all “higher” ratings, indicating that the programs that match the ratings will be blocked.



To unblock a rating, select it by moving the joystick up or down, then press ⊕. The indicator 🔒 changes into “-” and all “lower” ratings are unblocked.

Some TV ratings have additional content ratings called “extenders.” The extenders are defined as follows: D (sexually suggestive Dialog), FV (Fantasy Violence), L (Coarse Language), S (Sexual situations) and V (Violence). By setting the extenders, you can define additional viewing limits. All of the extenders included in the selected ratings will be blocked. If you wish to allow any of them to be viewed, go to step 8.

8 Move the joystick left or right to select the extender to be viewed, and press ⊕.



"-" appears beside the selected extender, indicating that the programs that match the extender can be viewed.

If you press ⊕ again, 🔒 is displayed to show that the programs that match the extender will be blocked again.

9 Repeat step 8 for other extenders.

All programs that match the ratings you select and higher, except for the extenders that were canceled, will be blocked.

10 Press MENU to exit the menu screen.

US custom rating options

If you selected U.S.A. as the country of residence on page 60, the Custom Rating Menu includes the following options. (If you selected Canada, see page 67.)

Option	*Description*	
Movie Rating	G	All children and General Audience.
	PG	Parental Guidance suggested.
	PG-13	Parental Guidance for children under 13.
	R	Restricted viewing, parental guidance is suggested for children under 17.
	NC-17 and X	No one 17 and under allowed.
TV Rating *Block programs by their rating, content or both*	Age-Based Options	
	TV-Y	All children.
	TV-Y7	Directed to older children.
	TV-G	General Audience.
	TV-PG	Parental Guidance suggested.
	TV-14	Parents Strongly cautioned.
	TV-MA	Mature Audience only.
	Content-Based Options	
	FV	Fantasy Violence.
	D	Suggestive Dialogue.
	L	Strong Language.
	S	Sexual situations.
	V	Violence.
Unrated *Block programs or movies that are broadcast without a rating*	Block	Blocks all programs and movies that are broadcast without a rating.
	Allow	Allows programs and movies that are broadcast without a rating.

To ensure maximum blocking capability, the age-based ratings should be blocked.

If you choose to block unrated TV programs, please be aware that the following programs may be blocked: emergency broadcasts, political programs, sports, news, public service announcements, religious programs and weather.

✍ The content ratings will increase depending on the level of the age-based rating. For example, a program with a TV-PG V (Violence) rating may contain moderate violence, while a TV-14 V (Violence) rating may contain more intense violence.

Canadian custom rating options

If you selected Canada as the country of residence on page 60, the Custom Rating Menu includes the following options. (If you selected U.S.A., see page 66.)

Option	Description	
English Rating	C	All children.
	C8+	Children 8 years and older.
	G	General programming.
	PG	Parental Guidance.
	14+	Viewers 14 and older.
	18+	Adult programming.
French Rating	G	General programming.
	8 ans+	Not recommended for young children.
	13 ans+	Not recommended for ages under 13.
	16 ans+	Not recommended for ages under 16.
	18 ans+	Programming restricted to adults.
USA Rating	See “TV Rating” on page 66 for details.	

Other Information

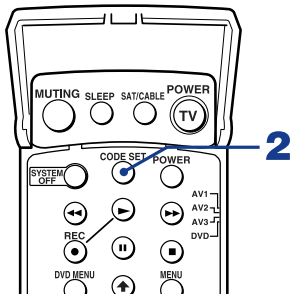
Programming the Remote Control

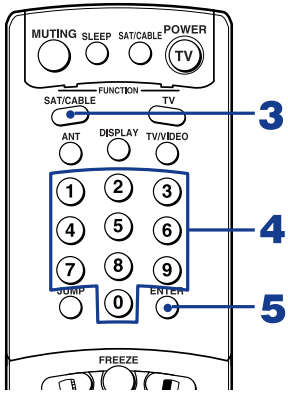
The remote control is preset to operate Sony brand video equipment.

Sony Equipment	Switch Position on Remote Control	Programmable Code Number
Beta, ED Beta VCRs	AV1	303
8 mm VCR	AV2	302
VHS VCR	AV3	301
DVD Player	DVD	751

If you have video equipment other than Sony brand that you want to control with the projection TV's remote control, use the following procedures to program the remote control.

✍ The equipment must have infrared (IR) remote capability in order to be used with the remote control.

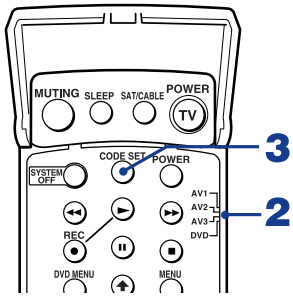


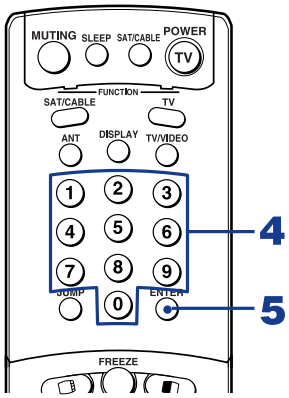


From the "Manufacturer's Codes" listed on page 70, select the three-digit code number for the manufacturer's code for your component. If more than one code number is listed, start with the number listed first. Use the code number to complete the following procedure.

To program a cable box or a satellite receiver

1. Open the panel of the remote control.
2. Press CODE SET inside the panel.
3. Close the panel and press SAT/CABLE (FUNCTON).
4. Enter the three-digit manufacturer's code number using the 0-9 buttons.
5. Press ENTER.
6. To check if the code number works, aim the projection TV's remote control at the component and press the green POWER button that corresponds with that component. If it responds, the programming is completed. If not, try using the other codes listed for that manufacturer.





To program video equipment

1. Open the panel of the remote control.
2. Move the slide switch to the desired component type.
3. Press CODE SET inside the panel.

   ✍ You must perform step 4 within 10 seconds of step 3, or you must start again from step 3.

4. Close the panel and enter the three-digit manufacturer's code number using the 0-9 buttons.
5. Press ENTER.
6. To check if the code number works, aim the projection TV's remote control at the component, open the panel, and press the green POWER button. If it responds, the programming is completed. If not, try using the other codes listed for that manufacturer.

Tips

- If more than one code number is listed, try entering them one by one until you come to the correct code for your component.
- If you enter a new code number, the code number you previously entered at that setting is erased.
- In some rare cases, you may not be able to operate your component with the Sony remote control. In this case, use the component's own remote control unit.

Manufacturer's Codes

VCRs

Manufacturer	*Code*
Sony	301
Admiral (M. Ward)	327
Aiwa	338, 344
Audio Dynamic	314, 337
Broksonic	319, 317
Canon	309, 308
Citizen	332
Craig	302, 332
Criterion	315
Curtis Mathes	304, 338, 309
Daewoo	341, 312, 309
DBX	314, 336, 337
Dimensia	304
Emerson	319, 320, 316, 317, 318, 341
Fisher	330, 335
Funai	338
General Electric	329, 304, 309
Go Video	322, 339, 340
Goldstar	332
Hitachi	306, 304, 305, 338
Instant Replay	309, 308
JC Penney	309, 305, 304, 330, 314, 336, 337
JVC	314, 336, 337, 345, 346, 347
Kenwood	314, 336, 332, 337
LXI (Sears)	332, 305, 330, 335, 338
Magnavox	308, 309, 310
Marantz	314, 336, 337
Marta	332
Memorex	309, 335
Minolta	305, 304
Mitsubishi/ MGA	323, 324, 325, 326
Multitech	325, 338, 321
NEC	314, 336, 337
Olympic	309, 308
Optimus	327
Panasonic	308, 309, 306, 307
Pentax	305, 304
Philco	308, 309
Philips	308, 309, 310
Pioneer	308
Quasar	308, 309, 306
RCA/ PROSCAN	304, 305, 308, 309, 311, 312, 313, 310, 329
Realistic	309, 330, 328, 335, 324, 338
Sansui	314
Samsung	322, 313, 321
Sanyo	330, 335
Scott	312, 313, 321, 335, 323, 324, 325, 326
Sharp	327, 328
Shintom	315
Signature 2000 (M. Ward)	338, 327
SV2000	338
Sylvania	308, 309, 338, 310
Symphonic	338
Tashiro	332
Tatung	314, 336, 337
Teac	314, 336, 338, 337
Technics	309, 308
Toshiba	312, 311
Wards	327, 328, 335, 331, 332
Yamaha	314, 330, 336, 337
Zenith	331

DVD Players

Manufacturer	*Code*
Sony	751
Panasonic	753
Pioneer	752
RCA	755
Toshiba	754

Cable Boxes

Manufacturer	*Code*
Hamlin/Regal	222, 223, 224, 225, 226
Jerrold/G. I.	201, 202, 203, 204, 205, 206, 207, 208, 218
Oak	227, 228, 229
Panasonic	219, 220, 221
Pioneer	214, 215
Scientific Atlanta	209, 210, 211
Tocom	216, 217
Zenith	212, 213

Satellite Receivers

Manufacturer	*Code*
Sony	801
General Electric	802
Hitachi	805
Hughes	804
Panasonic	803
RCA/ PROSCAN	802, 808
Toshiba	806, 807

Operating Other Components with Your Projection TV Remote Control

Operating a VCR

Open the panel and move the slide switch to the AV input you coded for this device.

To Do This ...	Press
Turn on/off	green POWER button (inside the panel)
Change channels	CH +/–
Record	► and REC simultaneously
Play	►
Stop	■
Fast forward	►►
Rewind the tape	◄◄
Pause	❚❚ (press again to resume normal playback)
Search the picture forward or backward	►► or ◄◄ during playback (release to resume normal playback)
Change input mode	Slide switch

Operating a DVD Player

Open the panel and move the slide switch to the DVD input you coded for this device.

To Do This ...	Press
Turn on/off	green POWER button (inside the panel)
Play	►
Stop	■
Pause	❚❚ (press again to resume normal playback)
Step through different tracks of an audio disc	►► to step forward or ◄◄ to step backward
Step through different chapters of a video disc	CH+ to step forward or CH– to step backward
Display the DVD menu	DVD MENU
Display the menu (Setup)	MENU
Operate the DVD menu	↑, ↓, ←, →, ENTER

(Continued)

Operating a Cable Box

To Do This ...	Press
Turn on/off	SAT/CABLE (POWER)
Select Cable Box	SAT/CABLE (FUNCTION)
Select a channel	0-9 buttons, ENTER
Change channels	CH +/–
Back to previous channel	JUMP

Operating a Satellite Receiver

To Do This ...	Press
Turn on/off	SAT/CABLE (POWER)
Select Satellite Receiver	SAT/CABLE (FUNCTION)
Select a channel	0-9 buttons, ENTER
Change channels	CH +/–
Back to previous channel	JUMP
Display channel number	DISPLAY
Display DBS guide	GUIDE
Display DBS menu	MENU
Move highlight (cursor)	Joystick or arrows
Select item	

Troubleshooting

If, after reading these operating instructions, you have additional questions related to the use of your Sony television, please call our Customer Information Services Center at 1-800-222-SONY (7669) (U.S. residents only) or (416) 499-SONY (7669) (Canadian residents only).

Problem	Possible Remedies
No picture (screen not lit), no sound	❑ Make sure the projection TV's power cord is connected securely to the wall outlet. ❑ Push the power button on the front of the projection TV. ❑ Check to see if the TV/VIDEO setting is correct: when watching TV, set to TV, and when watching connected equipment, set to VIDEO 1, 2, 3, 4, 5, 6 or 7. ❑ Try another channel. It could be station trouble. ❑ The Parental Control feature is activated (see "Using the Parent Menu" on page 60). ❑ If your projection TV does not turn on, and a red light keeps flashing, your projection TV may need service. Call your local Sony Service Center.
Remote control does not operate	❑ Batteries could be weak. Replace the batteries. ❑ Press TV (FUNCTION) when operating your projection TV. ❑ Make sure the projection TV's power cord is connected securely to the wall outlet. ❑ Locate the projection TV at least 3-4 feet away from fluorescent lights. ❑ Check the orientation of the batteries.
Dark, poor or no picture (screen lit), good sound	❑ Adjust the Picture setting in the Video menu (see page 49). ❑ Adjust the Brightness setting in the Video menu (see page 49). ❑ Check antenna/cable connections. ❑ Adjust the convergence again using FLASH FOCUS (see "Adjusting the Convergence Automatically – FLASH FOCUS™ –" on page 33).
Good picture, no sound	❑ Press MUTING so that "MUTING" disappears from the screen (see page 34). ❑ Make sure Speaker is set to ON in the Audio menu (see page 52). ❑ Check the MTS setting in the Audio menu (see "MTS" on page 51).
Cannot receive digital channels (when a DTV receiver is connected)	❑ Check the connections between the DTV receiver and the projection TV (see page 28). ❑ Check your local listings to find out if you can receive digital broadcasts in your area.
Cannot receive upper channels (UHF) when using an antenna	❑ Change Cable to OFF (see page 53). ❑ Use Auto Program in the Channel menu to add receivable channels that are not presently in TV memory (see page 54).
No color	❑ Adjust the Color settings in the Video menu (see page 49).
Only snow and noise appear on the screen	❑ Check the Cable setting in the Channel menu (see "Cable" on page 53). ❑ Check the antenna/cable connections. ❑ Make sure the channel is broadcasting programs. ❑ Press ANT to change the input mode (see page 37).
Dotted lines or stripes	❑ Adjust the antenna. ❑ Move the projection TV away from noise sources such as cars, neon signs, or hair-dryers.

(Continued)

Problem	Possible Remedies
Projection TV is fixed to one channel	❑ Use Auto Program in the Channel menu to add receivable channels that are not presently in TV memory (see page 54). ❑ Check your Channel Fix settings (see page 54).
Double images or ghosts	❑ Use a highly directional outdoor antenna or a cable (when the problem is caused by reflections from nearby mountains or tall buildings).
Cannot operate menu	❑ If the item you want to choose appears in gray, you cannot select it. ❑ Turn the projection TV's power off and on again.
Cannot receive any channels when using cable TV	❑ Use Auto Program in the Channel menu to add receivable channels that are not presently in TV memory (see page 54). ❑ Check your cable settings. ❑ Make sure Cable is set to ON in the Channel menu (see page 53).
Cannot gain enough volume when using a cable box	❑ Increase the volume of the cable box using the cable box's remote control. Then press TV (FUNCTION) and adjust the projection TV's volume.
Channel Index does not display all available channels	❑ Make sure Cable is set to ON in the Channel menu (see "Cable" on page 53). ❑ Use Auto Program in the Channel menu to add receivable TV channels that are not presently in TV memory (see page 54).
Cannot receive channels Unable to select a channel	❑ Use Auto Program in the Channel menu to add receivable TV channels that are not presently in TV memory (see page 54).
Lost password	❑ In the password screen (see page 60), enter the following master password: 4357. The master password clears your previous password; it cannot be used to temporarily unblock channels.
Cannot change channels with the remote control	❑ Be sure you have not inadvertently switched your projection TV from channel 3 or 4 setting if you are using another device to change channels. ❑ If you are using another device to control channels, be sure the "function" button for that device has been pressed, or the slide switch is set correctly. For example, if you are using your cable to control channels, be sure to press SAT/CABLE.
Cannot cycle through the other video equipment connected to the projection TV	❑ Be sure the Video Label feature has not been set to Skip (see page 59).
There is a black box on the screen	❑ You have selected a text option in the Setup menu and no text is available. (see page 58 to reset Setup selections) To turn this feature off, select OFF in the Caption Vision option. If you were trying to get closed captioning, select CC1 instead of Text 1-4.
There is no twin picture or it is just static	❑ Be sure your twin picture is set to a video source/channel that has a program airing. ❑ You may be tuned to a video input with nothing connected to it. Try cycling through your video inputs using TV/VIDEO. ❑ Twin View is not set to receive a signal from the AUX input. If you have connected a VCR, DVD player or satellite receiver to the AUX input on the projection TV, it will not show in the second picture.

Problem	Possible Remedies
You get the same program in the window picture as in the main picture	❑ Both may be set to the same channel. Try changing channels in either the main picture or the window picture. ❑ You may be running all your channels through a cable box. The cable box will only unscramble one signal at a time, so you cannot use the Twin View feature. If possible, run a direct cable to your projection TV's VHF/UHF input (this will only work if your cable system provides an unscrambled signal.)
You cannot get anything but TV channels in your second picture	❑ Be sure the video label has not been set to skip your video inputs. See the Setup menu on page 59.
Favorite Channel does not display your choices	❑ Verify that Favorite Channel is set to Manual in the Channel menu (see "Favorite Channel" on page 53).
Some video sources do not appear when you press TV/ VIDEO	❑ Ensure that Video Label is not set to SKIP (see "Video Label" on page 59).

Specifications

Projection System	3 picture tubes, 3 lenses, horizontal in-line system	
Picture Tube	7-inch high-brightness monochrome tubes (6.3 raster size), with optical coupling and liquid cooling system	
Projection Lenses	High performance, large diameter hybrid lens F1.1	
Antenna	75 ohm external terminal for VHF/UHF	
Television System	NTSC, American TV Standard	
Screen Size (measured diagonally)	46 inches (116.84 cm) (KP-46WT500) 51 inches (129.54 cm) (KP-51WS500) 57 inches (144.78 cm) (KP-57WS500) 65 inches (165 cm) (KP-65WS500)	
Channel Coverage		
VHF	2-13	
UHF	14-69	
CATV	1-125	
Power Requirements	120V, 60 Hz	
Number of Inputs / Outputs		
DVI-HDTV		1 terminal, 3.3V T.M.D.S., 50 ohms The DVI input terminal is compliant with the EIA-861 standard and is not intended for use with personal computers.
Video (IN)	4	1 Vp-p, 75 ohms unbalanced, sync negative
S Video (IN)	3	Y: 1 Vp-p, 75 ohms unbalanced, sync negative C: 0.286 Vp-p (Burst signal), 75 ohms
Audio (IN)	6	500 mVrms (100% modulation) Impedance: 47 kiloohms
AUDIO (VAR/FIX)	1	500 mVrms at the maximum volume setting (Variable) 500 mVrms (Fixed) Impedance (output): 1 kiloohm
TV Out	1	Video: 1 Vp-p 75 ohms unbalanced, Sync negative Audio: 500 mVrms (100% modulation) Impedance (output): 1 kiloohm
CONTROL S (IN/OUT)	1	minijacks
Component Video Input	2 (Y, P_B, P_R)	Y: 1.0 Vp-p, 75 ohms unbalanced, sync negative P_B: 0.7 Vp-p, 75 ohms P_R: 0.7 Vp-p, 75 ohms
RF Inputs	2	
Converter	1	
Speaker Output	20 W × 2	
Dimensions (W × H × D)	42 3/4 × 40 × 24 inches (1,086 × 1,017 × 609 mm) (KP-46WT500) 47 1/8 × 51 5/8 × 24 7/8 inches (1,194 × 1,310 × 630 mm) (KP-51WS500) 52 1/4 × 54 1/4 × 27 1/4 inches (1,326 × 1,377 × 690 mm) (KP-57WS500) 61 × 57 × 29 inches (1,542 × 1,452 × 735 mm) (KP-65WS500)	

Mass	135 lb (61.3 kg) (KP-46WT500) 167 lb 9oz (76 kg) (KP-51WS500) 196 lb 3oz (89 kg) (KP-57WS500) 275 lb 8 oz (125 kg) (KP-65WS500)
Power Consumption	
In Use	230 W
In Standby	Under 1 W
Supplied Accessories	
Remote Control	RM-Y909
AA (R6) Batteries	2 supplied for remote control
Optional Accessories	
AV Cable	VMC-810/820/830 HG
Audio Cable	RKC-515HG
Control S Cable	RK-G69HG
Component Video Cable	VMC-10/30 HG
AV Receiver	STR-V555ES or equivalent
TV Stand	SU-46WT5

Design and specifications are subject to change without notice.

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PRINTING THE SERVICE MANUAL

The PDF of this service manual is not designed to be printed from cover to cover. The pages vary in size, and must therefore be printed in sections based on page dimensions.

NON-SCHEMATIC PAGES

Data that does NOT INCLUDE schematic diagrams are formatted to 8.5 x 11 inches and can be printed on standard letter-size and/or A4-sized paper.

SCHEMATIC DIAGRAMS

The schematic diagram pages are provided in two ways, full size and tiled. The full-sized schematic diagrams are formatted on paper sizes between 8.5" x 11" and 18" x 30" depending upon each individual diagram size. Those diagrams that are LARGER than 11" x 17" in full-size mode have been tiled for your convience and can be printed on standard 11" x 17" (tabloid-size) paper, and reassembled.

TO PRINT FULL SIZE SCHEMATIC DIAGRAMS

If you have access to a large paper plotter or printer capable of outputting the full-sized diagrams, output as follows:

1) Note the page size(s) of the schematics you want to output as indicated in the middle window at the bottom of the viewing screen.

2) Go to the File menu and select Print Set-up. Choose the printer name and driver for your large format printer. Confirm that the printer settings are set to output the indicated page size or larger.

3) Close the Print Set Up screen and return to the File menu. Select "Print..." Input the page number of the schematic(s) you want to print in the print range window. Choose OK.

TO PRINT TILED VERSION OF SCHEMATICS

Schematic pages that are larger than 11" x 17" full-size are provided in a 11" x 17" printable tiled format near the end of the document. These can be printed to tabloid-sized paper and assembled to full-size for easy viewing.

If you have access to a printer capable of outputting the tabloid size (11" x 17") paper, then output the tiled version of the diagram as follows:

1) Note the page number(s) of the schematics you want to output as indicated in the middle window at the bottom of the viewing screen.

2) Go to the File menu and select Print Set-up. Choose the printer name and driver for your printer. Confirm that the plotter settings are set to output 11" x 17", or tabloid size paper in landscape ( ) mode.

3) Close the Print Set Up screen and return to the File menu. Select "Print..." Input the page number of the schematic(s) you want to print in the print range window. Choose OK.

TO PRINT SPECIFIC SECTIONS OF A SCHEMATIC

To print just a particular section of a PDF, rather than a full page, access the Graphics Select tool in the Acrobat Reader tool bar.

1) To view the Graphics Select Tool, press and HOLD the mouse button over the Text Select Tool which looks like:
This tool will expand to reveal to additional tools.
Choose the Graphics Select tool by placing the cursor over the button on of the far right that looks like:

2) After selecting the Graphics Select Tool, place your cursor in the document window and the cursor will change to a plus (+) symbol. Click and drag the cursor over the area you want to print. When you release the mouse button, a marquee (or dotted lined box) will be displayed outlining the area you selected.

3) With the marquee in place, go to the file menu and select the "Print..." option. When the print window appears, choose the option under the section called "Print Range" which says "Selected Graphic".

Select OK and the output will print only the area that you outlined with the marquee.

(continued >)

ON-SCREEN SEARCH OPTION

All of the text within the service manual PDF is content searchable. This means that you can enter any text, word, phrase or reference number that appears in the manual, and the PDF software will search, find and move the cursor to the location where you requested text first appears. This feature can be particularly useful in locating components on a specific schematic or printed wire circuit board (PWB) diagrams.

Follow these steps to effectively locate a component on a schematic diagram:

1) Locate the schematic you want to search by clicking on the corresponding bookmark on the left side of the screen. The view on the right of the screen will then jump to the desired schematic page.

2) Magnify the diagram to at least 400% before conducting a component search. This will enable you to easily view the reference number when it is highlighted on screen. To do this, click on the magnifying glass button on the tool bar at the top of the screen. Move the cursor over the diagram and RIGHT click you mouse. Select the 400% magnification option on the pop-up menu. Click on the button with the icon of the open hand to deactivate the magnification tool

3) Search the diagram (or the entire manual) by clicking on the binocular button tool at the top of the screen. The “Find” window will appear and allow you to type in your desired text. Type in a reference designator, such as R502, and click on the “Find” button. If the component is not on the diagram, but is listed anywhere else in the manual, the cursor will jump to the first location the text is found in the file. To find another instance of that same text, click on the binocular button again and select “Find Again.”

Self Diagnosis Supported model

SERVICE MANUAL

RA-6 CHASSIS

MODEL NAME	REMOTE COMMANDER	DESTINATION	CHASSIS NO.
KP-46WT500	*RM-Y909*	*US/CND*	*SCC-P65LA*

CORRECTION - 1

SUBJECT: ADDED LOCATOR LISTS

Correct the service manual as shown.
File this Correction with the service manual.

☛ : Corrected Item

Section 5: Diagrams (Page 62, 72 & 73)
5-4. Schematics and Supporting Information
Added Locator Lists to D and A PWBs

COLOR REAR VIDEO PROJECTOR

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Sony Corporation
Sony Technology Center
Technical Services
Service Promotion Department

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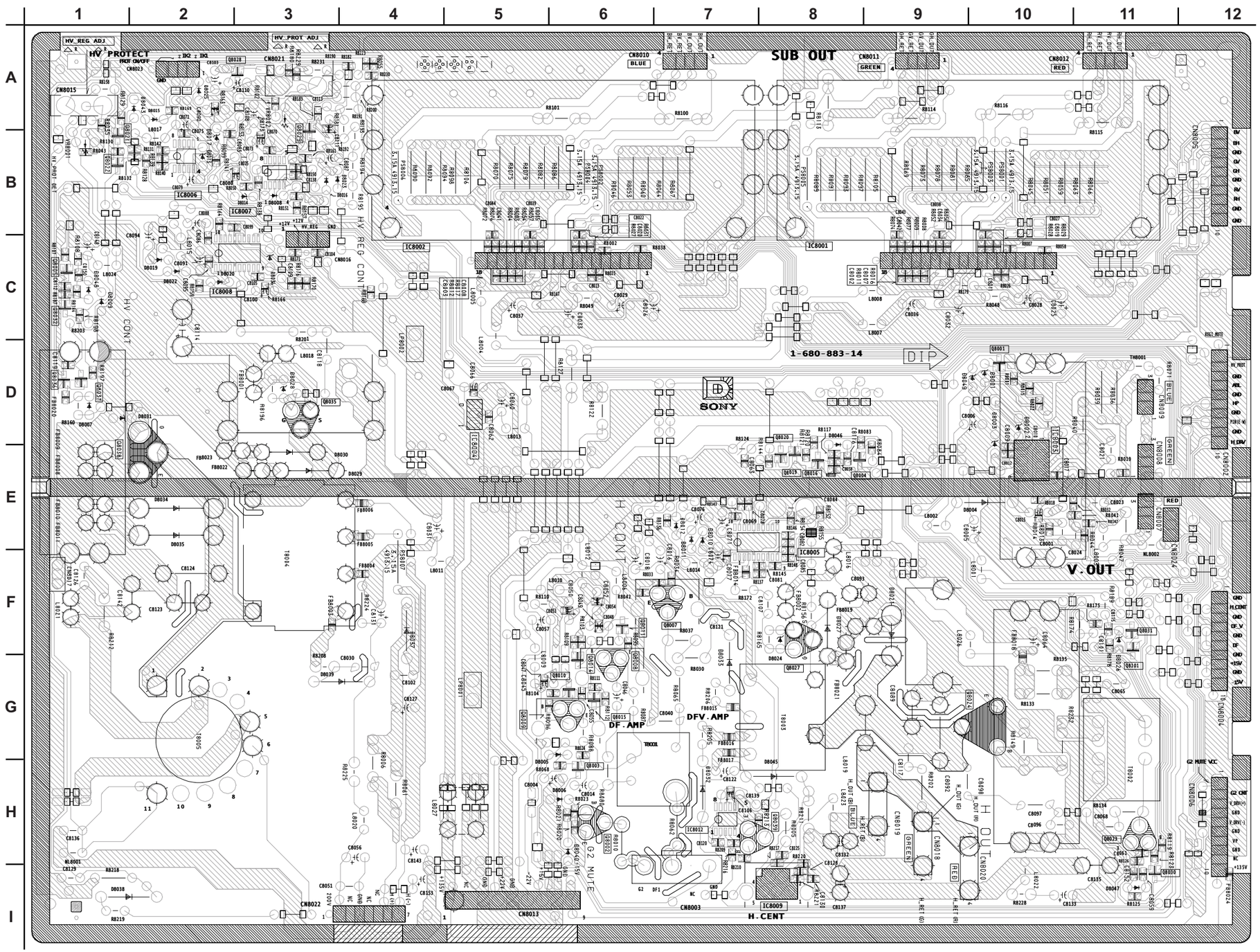
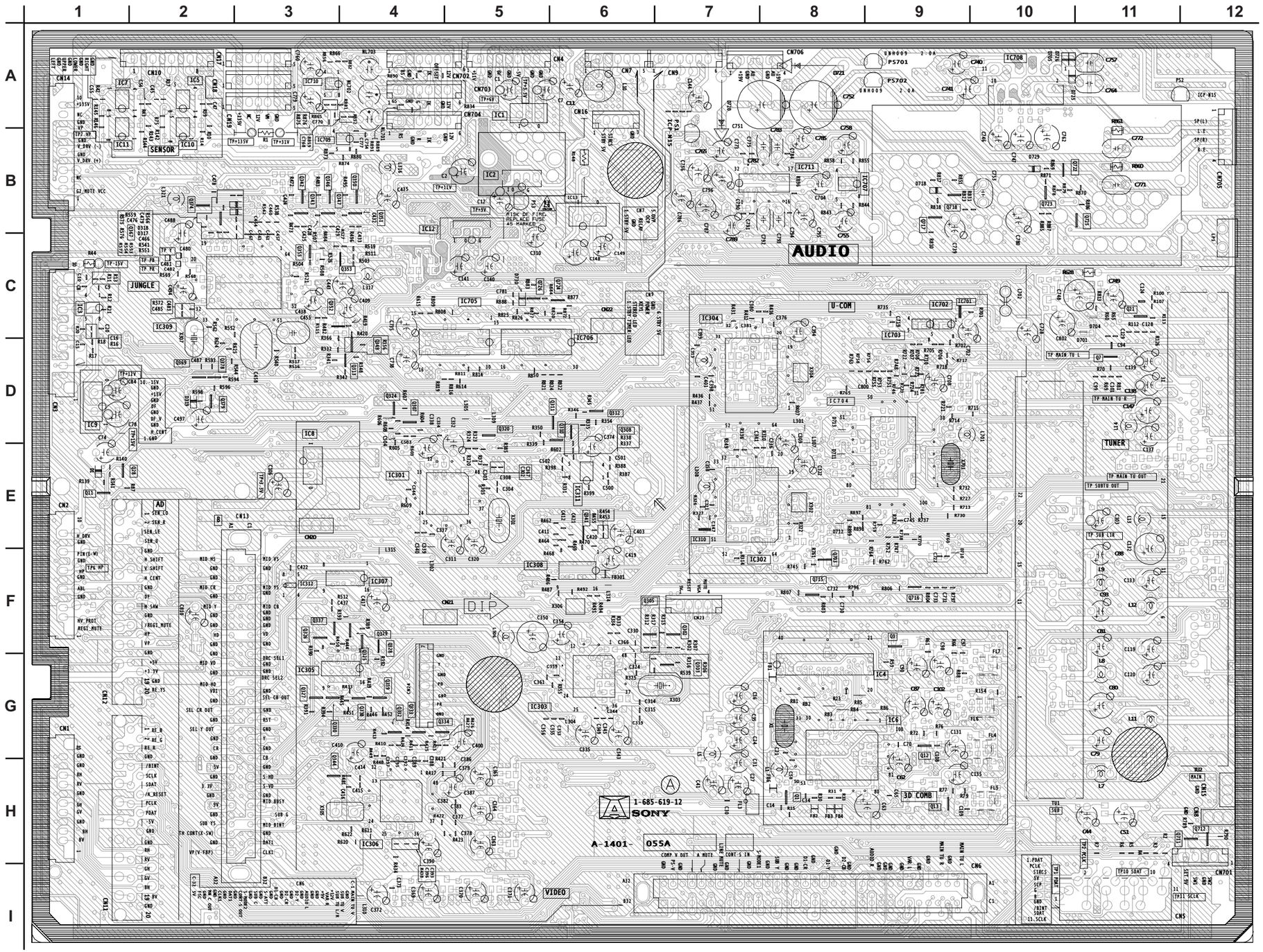
D [HV DRIVE, POWER SUPPLY, H DRIVE] [COMPONENT SIDE]



☛ D BOARD LOCATOR LIST

DIODE		IC	
D8001	D-10	IC8001	C-8
D8002	D-10	IC8002	C-4
D8003	D-10	IC8003	E-10
D8004	E-10	IC8004	E-5
D8005	H-6	IC8005	F-8
D8006	H-6	IC8006	B-2
D8007	D-10	IC8007	B-3
D8008	B-3	IC8008	C-2
D8009	C-1	IC8009	I-8
D8010	E-11	IC8012	H-7
D8011	E-11	**TRANSISTOR**	
D8012	E-11	Q8001	D-10
D8013	B-2	Q8002	H-6
D8014	B-3	Q8003	H-6
D8015	A-2	Q8004	E-9
D8016	B-3	Q8005	C-1
D8019	C-2	Q8007	F-7
D8020	C-2	Q8008	G-6
D8021	F-9	Q8009	G-5
D8022	C-2	Q8010	G-6
D8023	B-3	Q8011	F-6
D8024	G-7	Q8014	G-6
D8025	A-2	Q8015	G-6
D8026	G-11	Q8016	E-8
D8027	F-8	Q8019	E-8
D8028	D-3	Q8020	D-8
D8029	E-4	Q8021	B-1
D8030	E-4	Q8022	B-1
D8031	D-2	Q8023	H-11
D8032	H-7	Q8024	G-10
D8033	G-7	Q8027	F-8
D8034	E-2	Q8028	A-2
D8035	E-2	Q8029	B-3
D8036	C-3	Q8030	I-11
D8037	G-4	Q8031	F-11
D8038	I-2	Q8032	C-1
D8039	G-4	Q8035	D-3
D8043	B-1	Q8036	D-1
D8045	H-8	Q8037	D-1
D8046	D-8	Q8038	D-1
D8047	I-11	Q8039	H-8
		Q8101	G-11

A [TUNER, 3D COMB, AREG, CRT DRIVE, YCT, SYSTEM CONTROL, AUDIO OUTPUT] [COMPONENT SIDE]

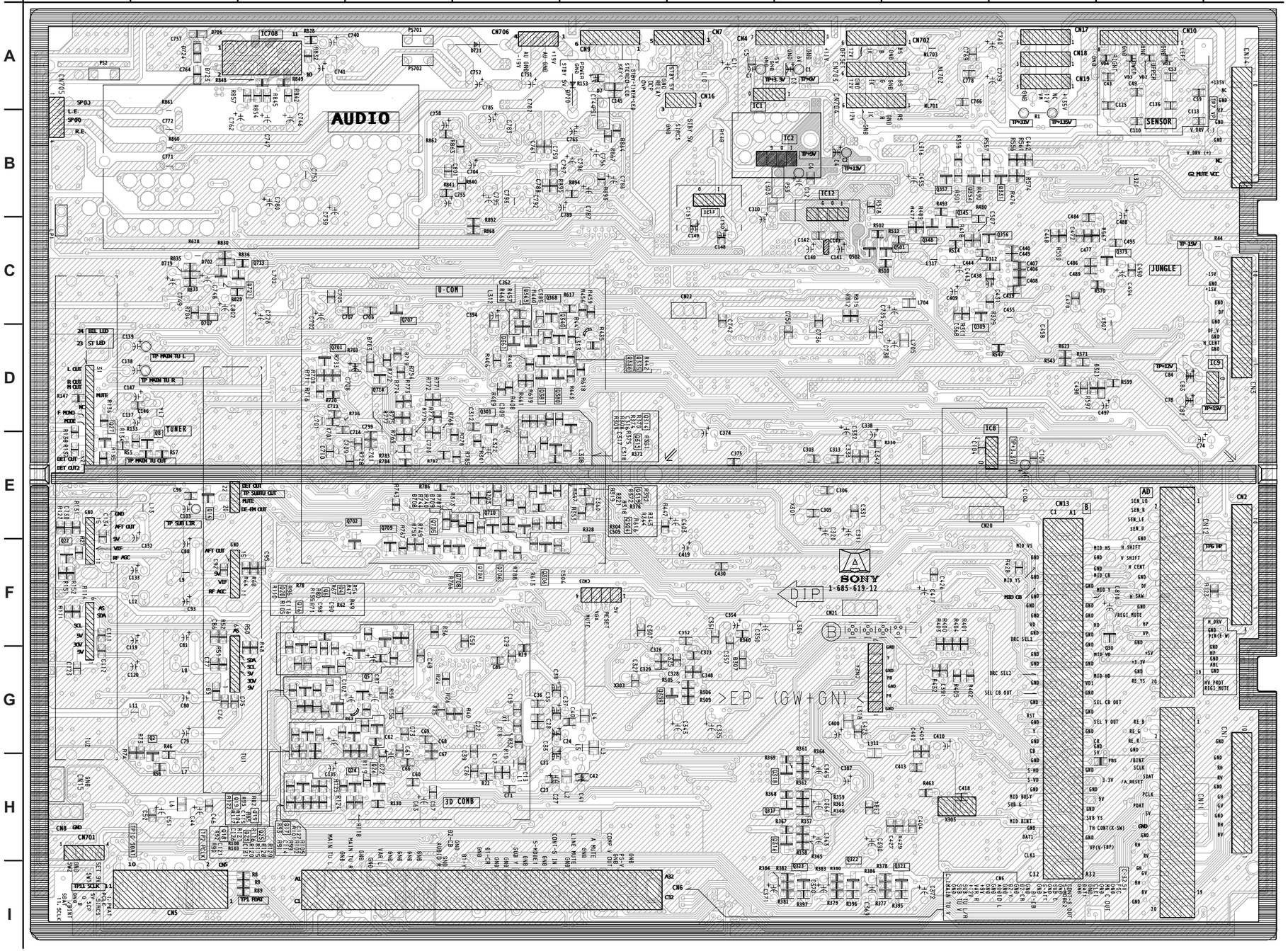


☛ A BOARD LOCATOR LIST

DIODE		TRANSISTOR	
D1	E-1	Q11	E-1
D317	C-2	Q12	G-9
D318	C-2	Q13	H-9
D319	D-2	Q21	C-11
D701	C-11	Q302	F-7
D704	C-11	Q303	F-7
D705	A-10	Q305	F-6
D710	F-9	Q307	D-4
D711	E-8	Q308	B-6
D712	E-8	Q310	D-5
D713	D-8	Q311	D-5
D718	B-9	Q312	D-6
D725	A-10	Q313	D-4
D726	A-10	Q320	D-5
D729	B-10	Q324	D-4
IC		Q325	F-4
IC1	A-5	Q326	F-4
IC2	B-5	Q327	G-3
IC3	C-1	Q328	F-4
IC4	G-9	Q329	F-4
IC5	A-2	Q330	G-3
IC6	G-9	Q332	G-4
IC7	A-2	Q333	G-4
IC8	D-3	Q334	G-4
IC9	D-1	Q337	F-3
IC10	B-2	Q338	G-4
IC11	B-1	Q339	G-4
IC12	B-4	Q341	E-6
IC13	B-6	Q342	B-3
IC301	E-4	Q343	B-3
IC302	F-7	Q344	G-3
IC303	G-5	Q346	B-3
IC304	C-7	Q347	B-3
IC305	G-3	Q349	D-4
IC306	H-4	Q350	B-4
IC307	F-4	Q351	B-4
IC308	F-5	Q352	C-3
IC309	C-2	Q353	C-4
IC310	E-7	Q355	C-3
IC311	E-6	Q367	C-1
IC312	F-3	Q369	D-2
IC701	C-9	Q374	B-2
IC702	C-9	Q378	D-2
IC703	C-9	Q379	D-2
IC704	D-8	Q703	F-8
IC707	B-8	Q712	H-12
IC708	A-10	Q715	F-8
IC711	B-8	Q716	F-9
TRANSISTOR		Q717	B-9
Q1	H-8	Q718	B-9
Q3	F-9	Q722	B-10
Q7	D-11	Q723	B-10
		Q725	B-11

A

[TUNER, 3D COMB, AREG, CRT DRIVE, YCT, SYSTEM CONTROL, AUDIO OUTPUT] [CONDUCTOR SIDE]



A BOARD LOCATOR LIST

DIODE		TRANSISTOR	
D5	G-2	Q321	I-9
D7	A-6	Q322	I-9
D307	G-7	Q323	I-8
D312	C-9	Q331	B-9
D321	D-10	Q335	D-5
D702	C-2	Q336	D-5
D703	D-4	Q340	C-5
D706	A-2	Q345	B-9
D708	E-4	Q348	C-9
D709	E-4	Q354	B-9
D719	C-2	Q356	B-10
D720	B-6	Q357	B-9
D721	A-5	Q358	G-6
D723	A-2	Q361	C-5
D724	A-2	Q363	C-5
TRANSISTOR		Q368	C-5
Q2	G-2	Q373	C-11
Q4	F-3	Q380	D-5
Q5	G-4	Q381	D-5
Q6	F-3	Q501	C-9
Q8	E-2	Q502	C-8
Q14	E-2	Q701	D-3
Q15	F-3	Q702	E-3
Q16	F-3	Q704	F-5
Q17	H-3	Q705	F-5
Q18	F-3	Q706	F-5
Q19	F-3	Q707	C-4
Q20	F-3	Q708	F-4
Q22	F-1	Q709	E-4
Q23	G-4	Q710	E-5
Q24	H-4	Q713	C-3
Q25	G-4	Q714	D-4
Q26	H-4	Q721	C-3
Q27	D-11		
Q28	G-4		
Q30	F-11		
Q301	D-5		
Q304	E-6		
Q306	F-5		
Q309	C-9		
Q314	E-5		
Q315	E-5		
Q316	H-7		
Q317	H-7		
Q318	H-7		
Q319	E-6		

SERVICE MANUAL — RA-6 CHASSIS

MODEL NAME	REMOTE COMMANDER	DESTINATION	CHASSIS NO.
KP-46WT500	*RM-Y909*	*US/CND*	*SCC-P65LA*

SUPPLEMENT - 1

SUBJECT: NEW CRT'S INTRODUCED
AFFECTS S/N'S 9,700,001 AND UP

Correct the service manual as shown.
File this Supplement with the service manual.

Section 6: Exploded Views
6-3. Picture Tube

When replacing CRT's for models with S/N 9,700,001 and up, please use the following P/N's:

A-1604-407-A	Coupler (R) Assy., CRT
A-1502-025-A	Coupler (G) Assy., CRT
A-1604-408-A	Coupler (B) Assy., CRT

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SERVICE MANUAL — RA-6 CHASSIS

MODEL NAME	REMOTE COMMANDER	DESTINATION	CHASSIS NO.
KP-46WT500	*RM-Y909*	*US/CND*	*SCC-P65LA*

SUPPLEMENT - 2

SUBJECT: ADDITIONAL INFORMATION ADDED TO SUPPLEMENT -1. D AND C BOARD P/N'S ADDED.

Correct the service manual as shown.
File this Supplement with the service manual.

Section 6: Exploded Views
6-4. Picture Tube

When replacing CRT's for models with S/N 9,700,001 and up, please use the following P/N's:

A-1604-407-A	Coupler (R) Assy., CRT
A-1502-025-A	Coupler (G) Assy., CRT
A-1604-408-A	Coupler (B) Assy., CRT

If it is necessary to replace a D or C Board for models with S/N 9,700,001 and up, please order the following:

D Board, Complete	A-1302-119-A
CR Board, Complete	A-1302-120-A
CG Board, Complete	A-1302-122-A
CB Board, Complete	A-1302-121-A

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SERVICE MANUAL — RA-6 CHASSIS

MODEL NAME	REMOTE COMMANDER	DESTINATION	CHASSIS NO.
KP-46WT500	*RM-Y909*	*US/CND*	*SCC-P65LA*

CORRECTION - 2

SUBJECT: UPDATED DATA RELATING TO CR, CG AND CB BOARDS

Correct the service manual as shown.
File this Correction with the service manual.

☛ : Corrected Item

Section 5: Diagrams
- 5-4. Schematics and Supporting Information
  New CR, CG and CB Boards (Pages 55-57)

Section 6: Exploded Views
- 6-3. Picture Tube
  New CR, CG and CB Board Part Numbers (Page 87)

Section 7: Electrical Parts List
- New Parts Lists for CR, CG and CB Boards (Pages 89-92)

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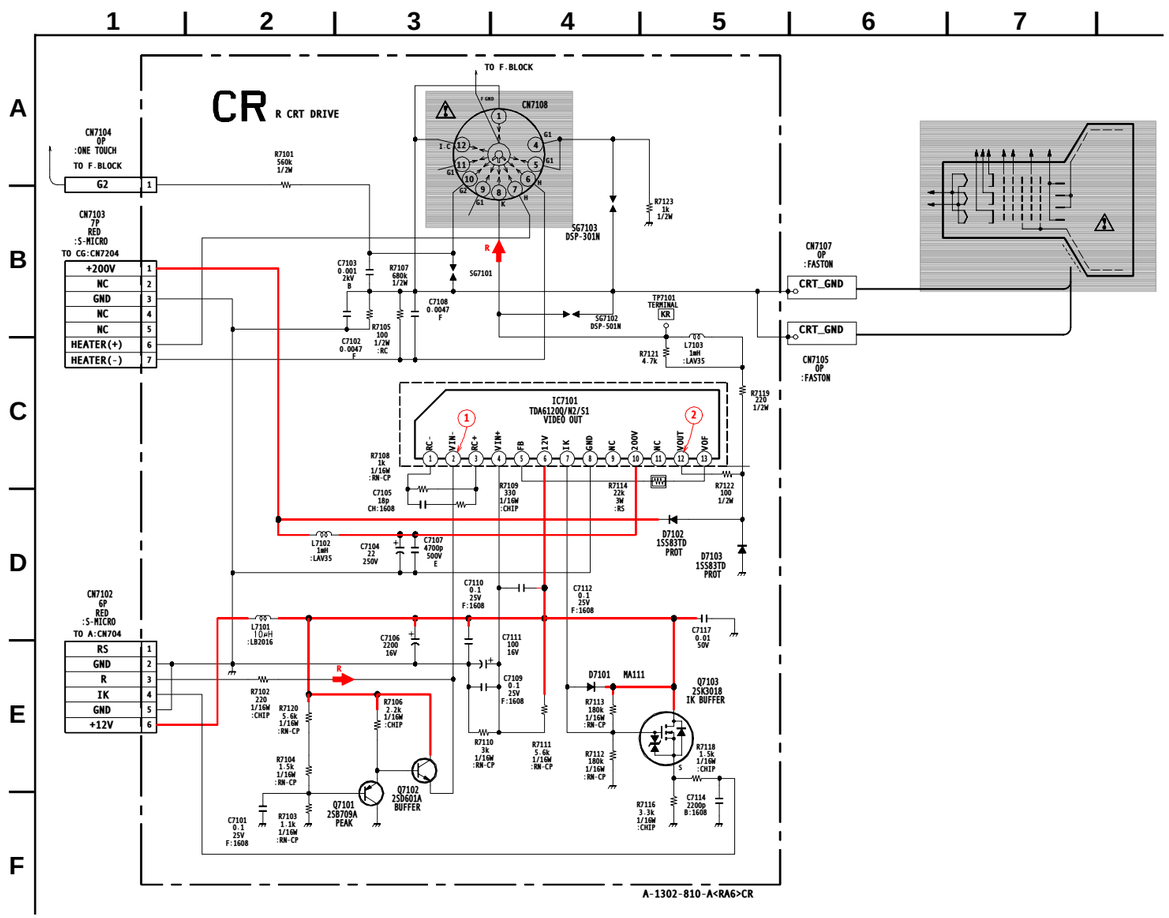
9-965-935-92

CR BOARD SCHEMATIC DIAGRAM



CR BOARD WAVEFORMS

1	2
2.0 Vp-p (H)	84.5 Vp-p (H)

CR BOARD IC VOLTAGE LIST

IC7101			
PIN	VOLT	PIN	VOLT
1	2.0	8	GND
2	2.7	9	N/C
3	3.4	10	200.0
4	4.1	11	N/C
5	2.6	12	157.7
6	12.0	13	158.2
7	7.0		

All voltages are in V.

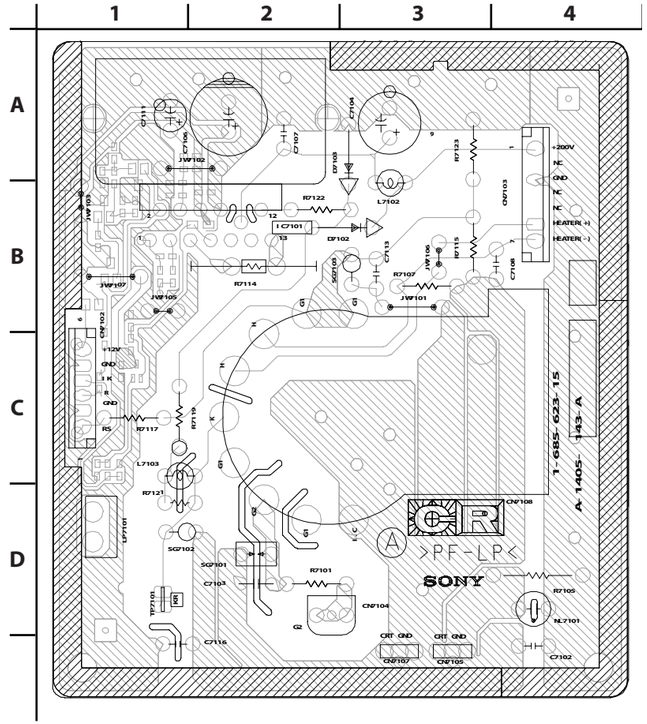
CR BOARD TRANSISTOR LIST

	B	C	E
Q7101	1.7	GND	2.3
Q7102	2.3	12.0	2.7

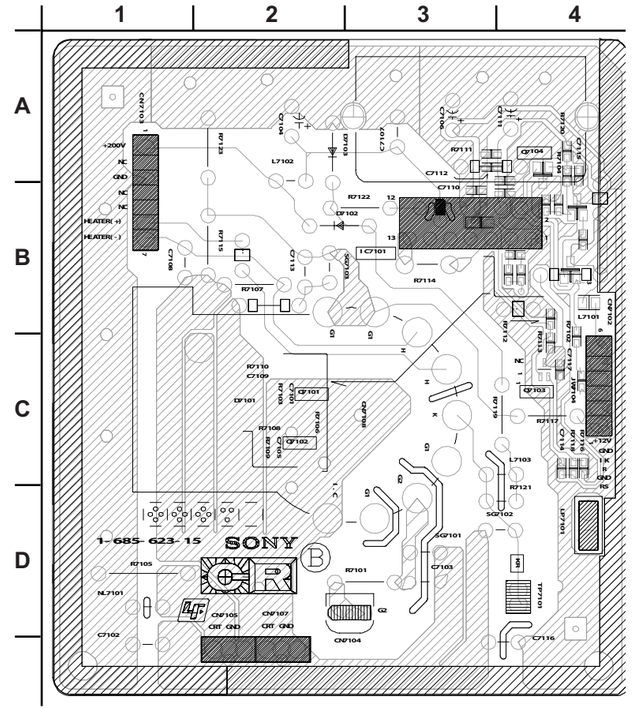
	G	D	S
Q7103	7.0	12.0	5.7

All voltages are in V.

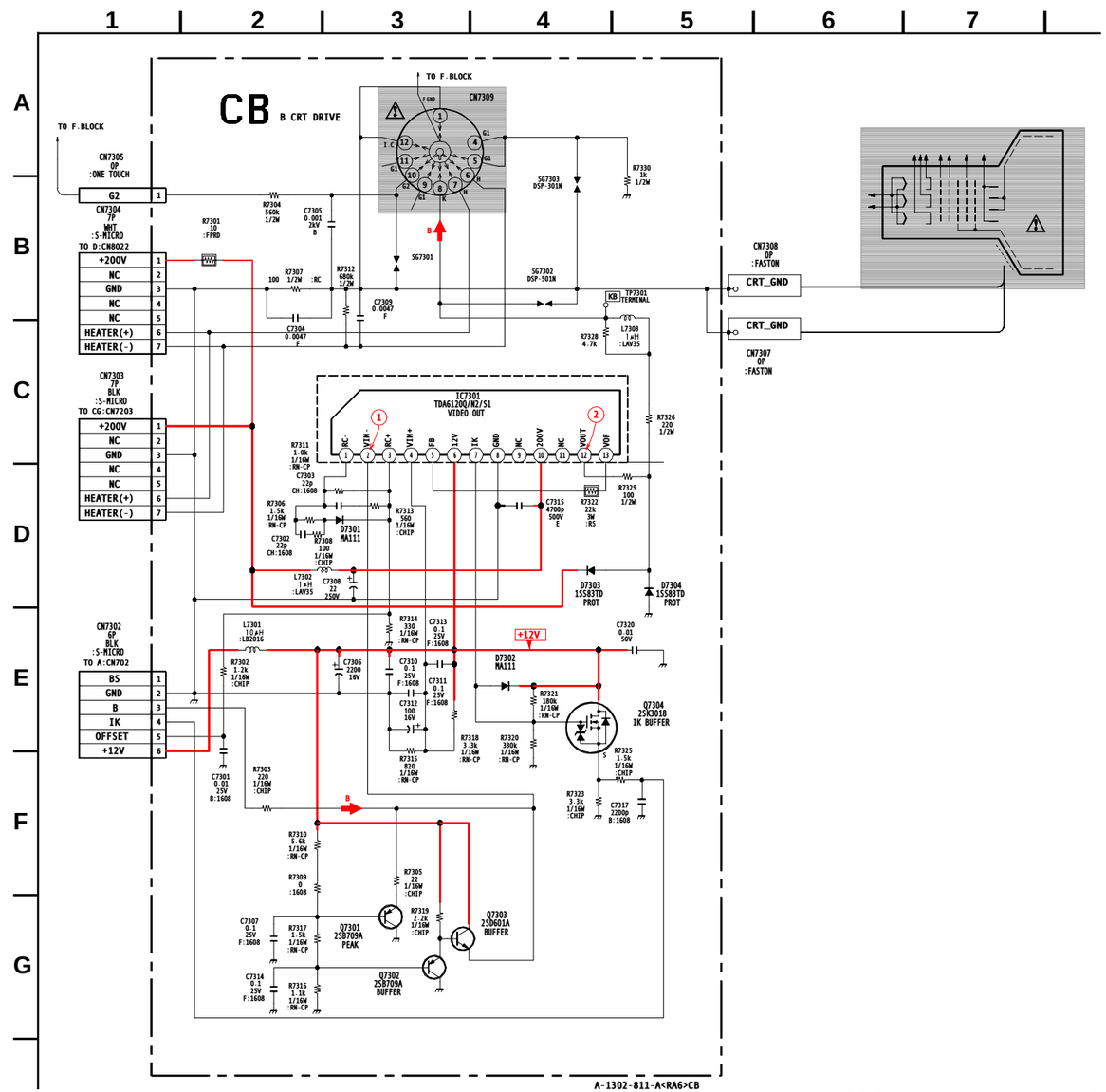
CR [R CRT DRIVE]
COMPONENT SIDE



CR [R CRT DRIVE]
CONDUCTOR SIDE



CB BOARD SCHEMATIC DIAGRAM



CB BOARD WAVEFORMS

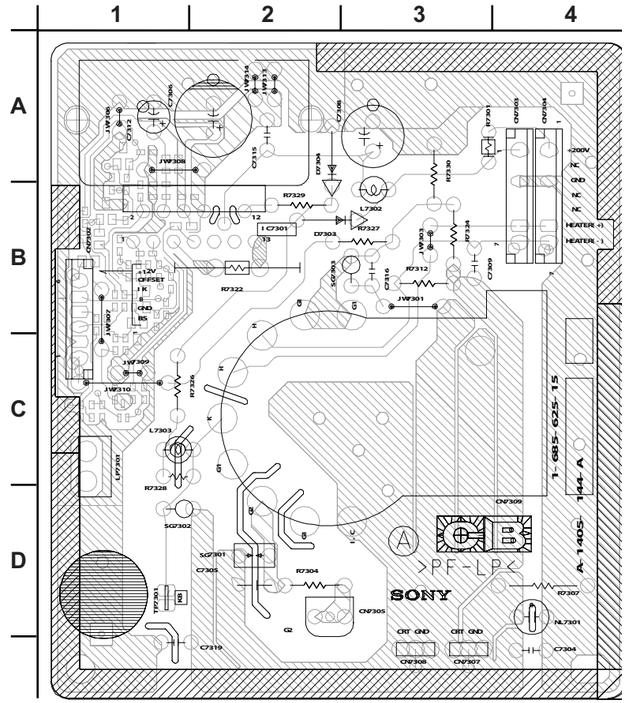
1	2
1.9 Vp-p (H)	94.0 Vp-p (H)

CB BOARD IC VOLTAGE LIST

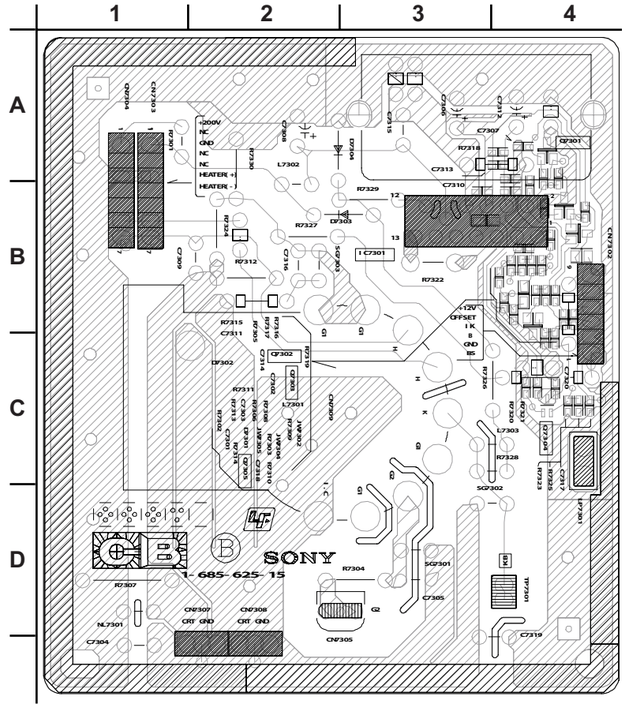
IC7301			
PIN	VOLT	PIN	VOLT
1	2.1	8	GND
2	2.9	9	N/C
3	1.6	10	200.0
4	2.9	11	N/C
5	2.5	12	161.8
6	12.0	13	144.5
7	7.3		

All voltages are in V.

CB [B CRT DRIVE] COMPONENT SIDE



CB [B CRT DRIVE] CONDUCTOR SIDE



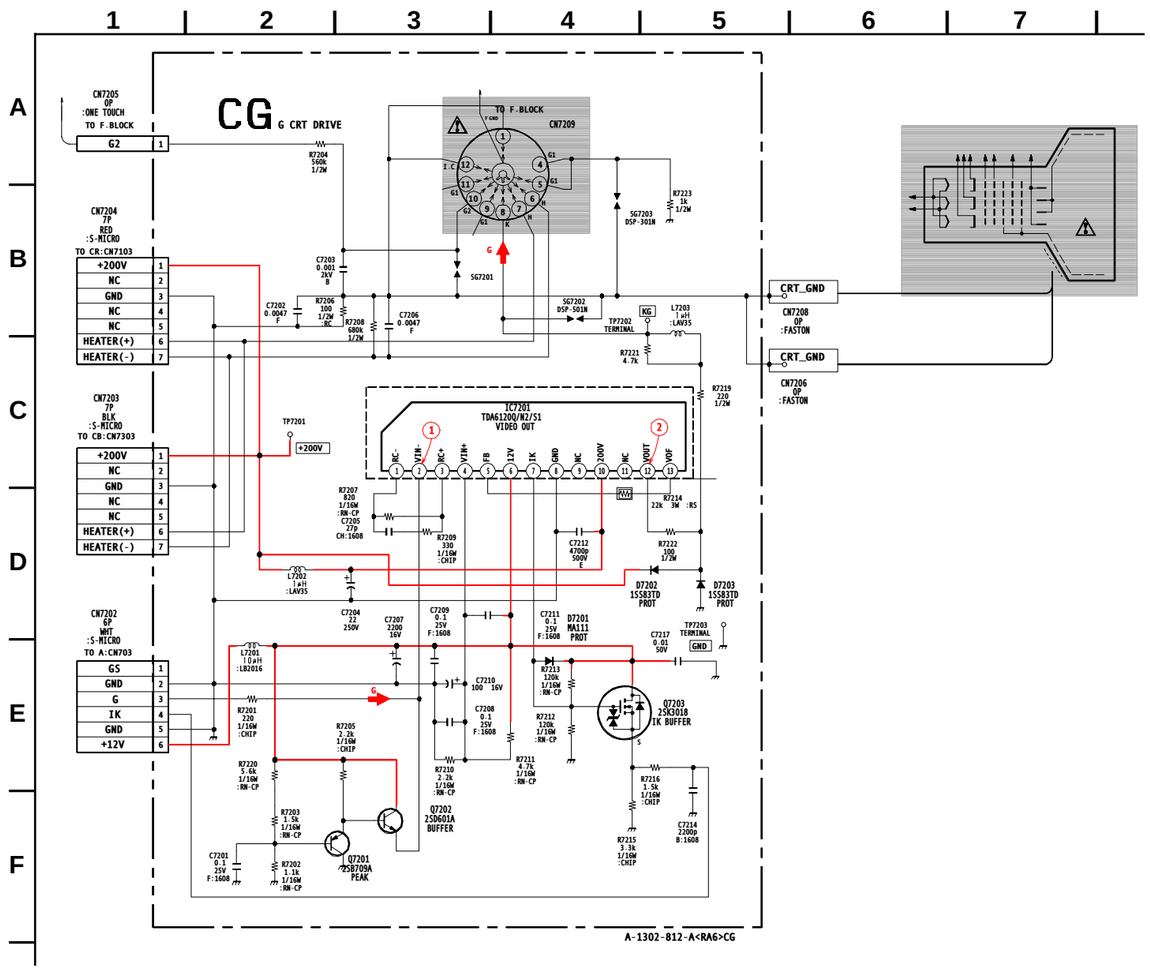
CB BOARD TRANSISTOR LIST

	B	C	E
Q7301	3.9	GND	3.0
Q7302	1.7	GND	2.4
Q7303	2.4	12.0	2.9

	G	D	S
Q7304	7.3	12.0	6.0

All voltages are in V.

CG BOARD SCHEMATIC DIAGRAM



CG BOARD WAVEFORMS

1	2
2.0 Vp-p (H)	101.5 Vp-p (H)

CG BOARD IC VOLTAGE LIST

IC7201			
PIN	VOLT	PIN	VOLT
1	1.9	8	GND
2	2.6	9	N/C
3	3.1	10	200.0
4	3.8	11	N/C
5	2.5	12	155.1
6	12.0	13	159.2
7	7.6		

All voltages are in V.

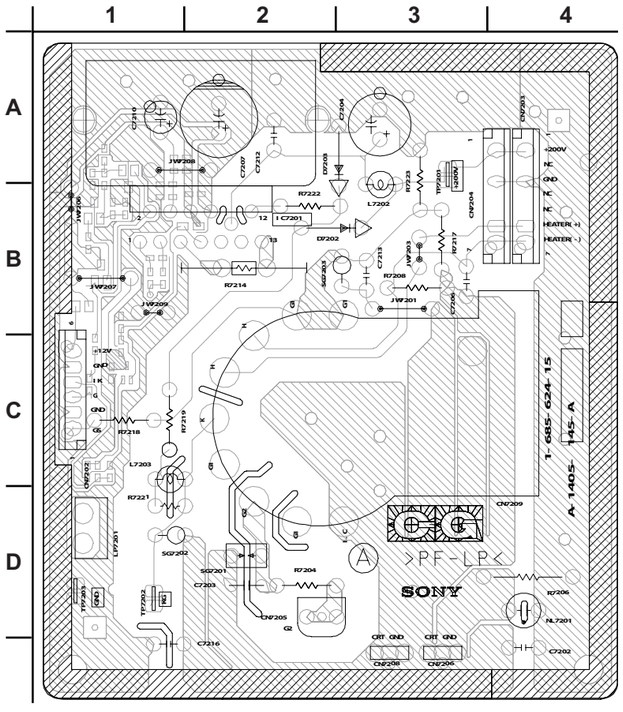
CG BOARD TRANSISTOR LIST

	B	C	E
Q7201	1.7	GND	2.3
Q7202	2.3	12.0	2.6

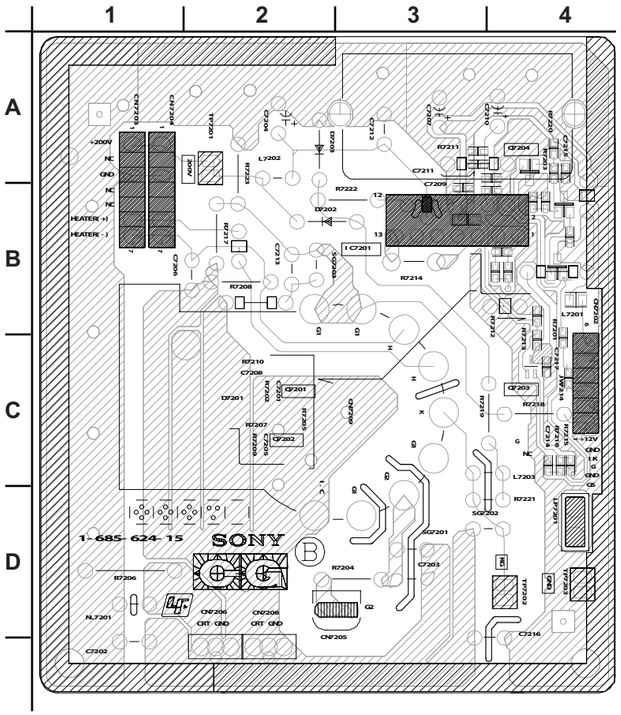
	G	D	S
Q7203	7.6	12.0	6.3

All voltages are in V.

CG [G CRT DRIVE]
COMPONENT SIDE



CG [G CRT DRIVE]
CONDUCTOR SIDE

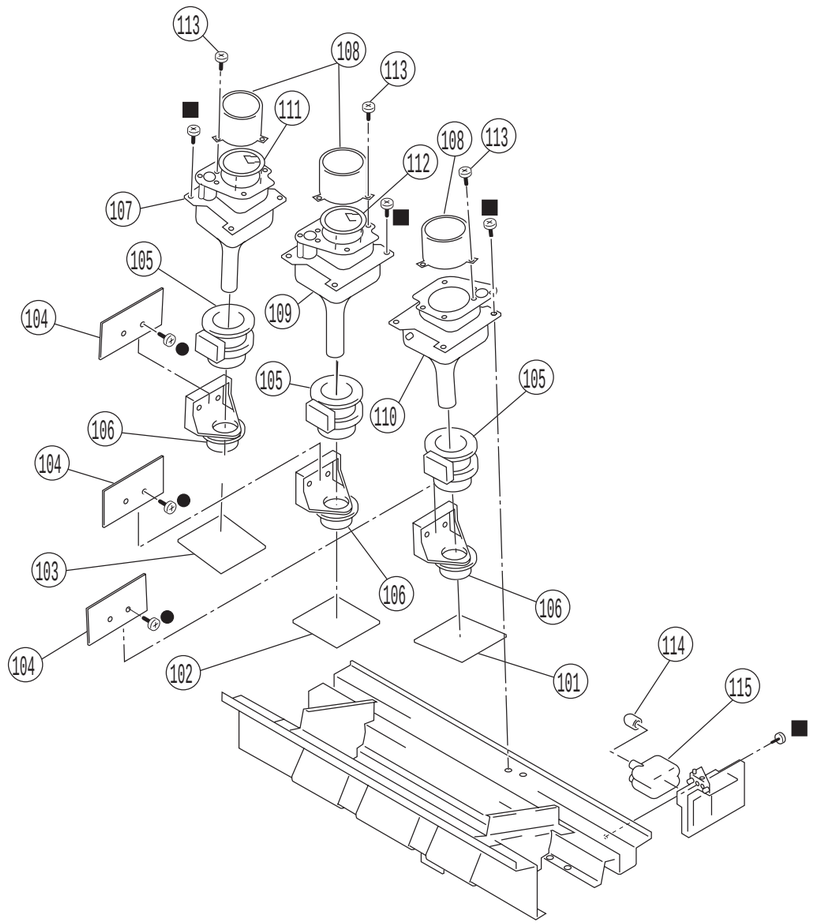


NOTE: The components identified by shading and ⚠ mark are critical for safety. Replace only with part number specified.

NOTE: Les composants identifies per un trame et une marque ⚠ sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

6-3. PICTURE TUBE

■ 7-685-663-71 SCREW +BVTP 4X16 TYPE2 IT-3



REF.NO.	PART NO.	DESCRIPTION
☛101	A-1302-811-A	CB BOARD, MOUNTED
☛102	A-1302-812-A	CG BOARD, MOUNTED
☛103	A-1302-810-A	CR BOARD, MOUNTED
104	A-1342-598-A	V BOARD, MOUNTED
⚠ 105	1-451-537-22	DEFLECTION YOKE
⚠ 106	1-452-790-31	NECK ASSY
⚠ 107	8-733-657-15	CRT 07MVC21(R)-L(FL)
108	4-083-751-01	LENS (DELTA 250)

REF.NO.	PART NO.	DESCRIPTION
⚠ 109	8-733-652-15	CRT 07MVC21(G)-L(FL)
⚠ 110	8-733-656-25	CRT 07MVC21(B)-L(FLG)
* 111	4-092-690-01	SHADE (R)
112	4-092-691-01	SHADE (G)
113	4-081-063-01	SCREW,DOME WASHER HEX TAP 4X20
* 114	4-373-137-01	CAP (Z), RUBBER
⚠ 115	8-598-955-32	BLOCK ASSY, HV HVB-1031

NOTE: The components identified by shading and ⚠ mark are critical for safety. Replace only with part number specified.

NOTE: Les composants identifies per un trame et une marque⚠ sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

VCR

REF.NO.	PART NO.	DESCRIPTION	VALUES		
R9023	1-249-421-11	CARBON	2.2K	5%	1/4W
R9024	1-249-405-11	CARBON	100	5%	1/4W
R9025	1-249-385-11	CARBON	2.2	5%	1/4W
R9027	1-249-385-11	CARBON	2.2	5%	1/4W
R9028	1-249-405-11	CARBON	100	5%	1/4W
R9029	1-215-913-11	METAL OXIDE	220	5%	3W
R9030	1-249-377-11	CARBON	0.47	5%	1/4W
R9031	1-249-385-11	CARBON	2.2	5%	1/4W
R9032	1-249-385-11	CARBON	2.2	5%	1/4W
R9033	1-249-436-11	CARBON	39K	5%	1/4W
R9034	1-249-436-11	CARBON	39K	5%	1/4W

☛CR

*	A-1302-810-A	**CR BOARD, COMPLETE**	
	4-382-854-11	SCREW (M3X10), P, SW (+)	
*	7-651-000-50	GREASE,SILICON (G-746) 200G	
	CAPACITOR		
C7101	1-164-156-11	CERAMIC CHIP	0.1µF 25V
C7102	1-101-003-00	CERAMIC	0.0047µF 50V
C7103	1-104-570-11	CERAMIC	0.001µF 10% 2KV
C7104	1-107-662-11	ELECT	22µF 20% 350V
C7105	1-162-918-11	CERAMIC CHIP	18pF 5% 50V
C7106	1-126-768-11	ELECT	2200µF 20% 16V
C7107	1-161-830-00	CERAMIC	0.0047µF 500V
C7108	1-101-003-00	CERAMIC	0.0047µF 50V
C7109	1-164-156-11	CERAMIC CHIP	0.1µF 25V
C7110	1-164-156-11	CERAMIC CHIP	0.1µF 25V
C7111	1-126-933-11	ELECT	100µF 20% 16V
C7112	1-164-156-11	CERAMIC CHIP	0.1µF 25V
C7114	1-162-966-11	CERAMIC CHIP	0.0022µF 10% 50V
C7117	1-164-096-11	CERAMIC	0.01µF 50V
	CONNECTOR		
* CN7102	1-564-509-11	PLUG, CONNECTOR 6P	
* CN7103	1-564-510-11	PLUG, CONNECTOR 7P	
CN7104	1-785-879-11	CONNECTOR, ONE TOUCH	
CN7105	1-695-915-11	TAB (CONTACT)	
CN7107	1-695-915-11	TAB (CONTACT)	
⚠ CN7108	1-251-182-11	SOCKET, CRT	

REF.NO.	PART NO.	DESCRIPTION	VALUES		
	DIODE				
D7101	8-719-404-50	DIODE	MA111-TX		
D7102	8-719-901-83	DIODE	1SS83		
D7103	8-719-901-83	DIODE	1SS83		
	IC				
IC7101	8-759-680-01	IC	TDA6120Q/N2/S1		
	JUMPER WIRE				
JW7104	1-216-864-11	SHORT CHIP			
	COIL				
L7101	1-469-555-21	INDUCTOR	10µH		
L7102	1-414-855-31	INDUCTOR	1µH		
L7103	1-414-855-31	INDUCTOR	1µH		
	TRANSISTOR				
Q7101	8-729-424-02	TRANSISTOR	2SB709A-QRS-TX		
Q7102	8-729-422-27	TRANSISTOR	2SD601A-Q		
Q7103	8-729-048-50	TRANSISTOR	2SK3018-T106		
	RESISTOR				
R7101	1-260-132-11	CARBON	560K	5%	1/2W
R7102	1-216-813-11	METAL CHIP	220	5%	1/10W
R7103	1-218-693-11	METAL CHIP	1.1K	0.50%	1/10W
R7104	1-218-696-11	METAL CHIP	1.5K	0.50%	1/10W
R7105	1-219-743-11	METAL	100	5%	1/2W
R7106	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R7107	1-260-133-11	CARBON	680K	5%	1/2W
R7108	1-218-692-11	METAL CHIP	1K	0.50%	1/10W
R7109	1-216-815-11	METAL CHIP	330	5%	1/10W
R7110	1-218-703-11	METAL CHIP	3K	0.50%	1/10W
R7111	1-218-710-11	METAL CHIP	5.6K	0.50%	1/10W
R7112	1-218-746-11	METAL CHIP	180K	0.50%	1/10W
R7113	1-218-746-11	METAL CHIP	180K	0.50%	1/10W
R7114	1-215-925-11	METAL OXIDE	22K	5%	3W
R7116	1-216-827-11	METAL CHIP	3.3K	5%	1/10W
R7118	1-216-823-11	METAL CHIP	1.5K	5%	1/10W
R7119	1-260-320-11	CARBON	220	5%	1/2W
R7120	1-218-710-11	METAL CHIP	5.6K	0.50%	1/10W
R7121	1-249-425-11	CARBON	4.7K	5%	1/4W
R7122	1-260-087-11	CARBON	100	5%	1/2W
R7123	1-260-328-11	CARBON	1K	5%	1/2W

NOTE: The components identified by shading and ⚠ mark are critical for safety. Replace only with part number specified.

NOTE: Les composants identifies per un trame et une marque ⚠ sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

CR CG

REF.NO.	PART NO.	DESCRIPTION	VALUES		
	SPARK GAP				
SG7101	1-519-422-11	GAP, SPARK			
SG7102	1-517-729-31	GAP, SPARK			
SG7103	1-519-421-11	GAP, DISCHARGE			
☛ CG					
	A-1302-812-A	**CG BOARD, COMPLETE**			
	4-382-854-11	SCREW (M3X10), P, SW (+)			
*	7-651-000-50	GREASE,SILICON (G-746) 200G			
	CAPACITOR				
C7201	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C7202	1-101-003-00	CERAMIC	0.0047µF		50V
C7203	1-104-570-11	CERAMIC	0.001µF	10%	2KV
C7204	1-107-662-11	ELECT	22µF	20%	350V
C7205	1-162-920-11	CERAMIC CHIP	27pF	5%	50V
C7206	1-101-003-00	CERAMIC	0.0047µF		50V
C7207	1-126-768-11	ELECT	2200µF	20%	16V
C7208	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C7209	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C7210	1-126-933-11	ELECT	100µF	20%	16V
C7211	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C7212	1-161-830-00	CERAMIC	0.0047µF		500V
C7214	1-162-966-11	CERAMIC CHIP	0.0022µF	10%	50V
C7217	1-164-096-11	CERAMIC	0.01µF		50V
	CONNECTOR				
* CN7202	1-564-509-11	PLUG, CONNECTOR 6P			
* CN7203	1-564-510-11	PLUG, CONNECTOR 7P			
* CN7204	1-564-510-11	PLUG, CONNECTOR 7P			
CN7205	1-785-879-11	CONNECTOR, ONE TOUCH			
CN7206	1-695-915-11	TAB (CONTACT)			
CN7208	1-695-915-11	TAB (CONTACT)			
⚠ CN7209	1-251-182-11	SOCKET, CRT			
	DIODE				
D7201	8-719-404-50	DIODE	MA111-TX		
D7202	8-719-901-83	DIODE	1SS83		
D7203	8-719-901-83	DIODE	1SS83		
	IC				
IC7201	8-759-680-01	IC	TDA6120Q/N2/S1		

REF.NO.	PART NO.	DESCRIPTION	VALUES		
	JUMPER WIRE				
JW7214	1-216-864-11	SHORT CHIP			
	COIL				
L7201	1-469-555-21	INDUCTOR	10µH		
L7202	1-414-855-31	INDUCTOR	1µH		
L7203	1-414-855-31	INDUCTOR	1µH		
	TRANSISTOR				
Q7201	8-729-424-02	TRANSISTOR	2SB709A-QRS-TX		
Q7202	8-729-422-27	TRANSISTOR	2SD601A-Q		
Q7203	8-729-048-50	TRANSISTOR	2SK3018-T106		
	RESISTOR				
R7201	1-216-813-11	METAL CHIP	220	5%	1/10W
R7202	1-218-693-11	METAL CHIP	1.1K	0.50%	1/10W
R7203	1-218-696-11	METAL CHIP	1.5K	0.50%	1/10W
R7204	1-260-132-11	CARBON	560K	5%	1/2W
R7205	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R7206	1-219-743-11	METAL	100	5%	1/2W
R7207	1-218-690-11	METAL CHIP	820	0.50%	1/10W
R7208	1-260-133-11	CARBON	680K	5%	1/2W
R7209	1-216-815-11	METAL CHIP	330	5%	1/10W
R7210	1-218-700-11	METAL CHIP	2.2K	0.50%	1/10W
R7211	1-218-708-11	METAL CHIP	4.7K	0.50%	1/10W
R7212	1-218-742-11	METAL CHIP	120K	0.50%	1/10W
R7213	1-218-742-11	METAL CHIP	120K	0.50%	1/10W
R7214	1-215-925-11	METAL OXIDE	22K	5%	3W
R7215	1-216-827-11	METAL CHIP	3.3K	5%	1/10W
R7216	1-216-823-11	METAL CHIP	1.5K	5%	1/10W
R7219	1-260-320-11	CARBON	220	5%	1/2W
R7220	1-218-710-11	METAL CHIP	5.6K	0.50%	1/10W
R7221	1-249-425-11	CARBON	4.7K	5%	1/4W
R7222	1-260-087-11	CARBON	100	5%	1/2W
R7223	1-260-328-11	CARBON	1K	5%	1/2W
	SPARK GAP				
SG7201	1-519-422-11	GAP, SPARK			
SG7202	1-517-729-31	GAP, SPARK			
SG7203	1-519-421-11	GAP, DISCHARGE			

NOTE: The components identified by shading and ⚠ mark are critical for safety. Replace only with part number specified.

NOTE: Les composants identifies per un trame et une marque⚠ sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

CB

CB

REF.NO.	PART NO.	DESCRIPTION	VALUES		
	A-1302-811-A	**CB BOARD, COMPLETE**			
	4-382-854-11	SCREW (M3X10), P, SW (+)			
*	7-651-000-50	GREASE,SILICON (G-746) 200G			
	CAPACITOR				
C7301	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C7302	1-162-919-11	CERAMIC CHIP	22pF	5%	50V
C7303	1-162-919-11	CERAMIC CHIP	22pF	5%	50V
C7304	1-101-003-00	CERAMIC	0.0047µF		50V
C7305	1-104-570-11	CERAMIC	0.001µF	10%	2KV
C7306	1-126-768-11	ELECT	2200µF	20%	16V
C7307	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C7308	1-107-662-11	ELECT	22µF	20%	350V
C7309	1-101-003-00	CERAMIC	0.0047µF		50V
C7310	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C7311	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C7312	1-126-933-11	ELECT	100µF	20%	16V
C7313	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C7314	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C7315	1-161-830-00	CERAMIC	0.0047µF		500V
C7317	1-162-966-11	CERAMIC CHIP	0.0022µF	10%	50V
C7320	1-164-096-11	CERAMIC	0.01µF		50V
	CONNECTOR				
* CN7302	1-564-509-11	PLUG, CONNECTOR	6P		
* CN7303	1-564-510-11	PLUG, CONNECTOR	7P		
* CN7304	1-564-510-11	PLUG, CONNECTOR	7P		
CN7305	1-785-879-11	CONNECTOR, ONE TOUCH			
CN7307	1-695-915-11	TAB (CONTACT)			
CN7308	1-695-915-11	TAB (CONTACT)			
⚠ CN7309	1-251-182-11	SOCKET, CRT			
	DIODE				
D7301	8-719-404-50	DIODE	MA111-TX		
D7302	8-719-404-50	DIODE	MA111-TX		
D7303	8-719-901-83	DIODE	1SS83		
D7304	8-719-901-83	DIODE	1SS83		
	IC				
IC7301	8-759-680-01	IC	TDA6120Q/N2/S1		

REF.NO.	PART NO.	DESCRIPTION	VALUES		
	JUMPER WIRE				
JW7302	1-216-864-11	SHORT CHIP			
JW7304	1-216-864-11	SHORT CHIP			
JW7305	1-216-864-11	SHORT CHIP			
	COIL				
L7301	1-469-555-21	INDUCTOR	10µH		
L7302	1-414-855-31	INDUCTOR	1µH		
L7303	1-414-855-31	INDUCTOR	1µH		
	TRANSISTOR				
Q7301	8-729-424-02	TRANSISTOR	2SB709A-QRS-TX		
Q7302	8-729-424-02	TRANSISTOR	2SB709A-QRS-TX		
Q7303	8-729-422-27	TRANSISTOR	2SD601A-Q		
Q7304	8-729-048-50	TRANSISTOR	2SK3018-T106		
	RESISTOR				
R7301	1-249-393-11	CARBON	10	5%	1/4W
R7302	1-216-822-11	METAL CHIP	1.2K	5%	1/10W
R7303	1-216-813-11	METAL CHIP	220	5%	1/10W
R7304	1-260-132-11	CARBON	560K	5%	1/2W
R7305	1-216-801-11	METAL CHIP	22	5%	1/10W
R7306	1-218-696-11	METAL CHIP	1.5K	0.50%	1/10W
R7307	1-219-743-11	METAL	100	5%	1/2W
R7308	1-216-809-11	METAL CHIP	100	5%	1/10W
R7309	1-216-864-11	SHORT CHIP			
R7310	1-218-710-11	METAL CHIP	5.6K	0.50%	1/10W
R7311	1-218-692-11	METAL CHIP	1K	0.50%	1/10W
R7312	1-260-133-11	CARBON	680K	5%	1/2W
R7313	1-216-818-11	METAL CHIP	560	5%	1/10W
R7314	1-218-680-11	METAL CHIP	330	0.50%	1/10W
R7315	1-218-690-11	METAL CHIP	820	0.50%	1/10W
R7316	1-218-693-11	METAL CHIP	1.1K	0.50%	1/10W
R7317	1-218-696-11	METAL CHIP	1.5K	0.50%	1/10W
R7318	1-218-704-11	METAL CHIP	3.3K	0.50%	1/10W
R7319	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R7320	1-218-752-11	METAL CHIP	330K	0.50%	1/10W
R7321	1-218-746-11	METAL CHIP	180K	0.50%	1/10W
R7322	1-215-925-11	METAL OXIDE	22K	5%	3W
R7323	1-216-827-11	METAL CHIP	3.3K	5%	1/10W
R7325	1-216-823-11	METAL CHIP	1.5K	5%	1/10W
R7326	1-260-320-11	CARBON	220	5%	1/2W

CB

REF.NO.	PART NO.	DESCRIPTION	VALUES			REF.NO.	PART NO.	DESCRIPTION	VALUES
R7328	1-249-425-11	CARBON	4.7K	5%	1/4W				
R7329	1-260-087-11	CARBON	100	5%	1/2W				
R7330	1-260-328-11	CARBON	1K	5%	1/2W				
	SPARK GAP								
SG7301	1-519-422-11	GAP, SPARK							
SG7302	1-517-729-31	GAP, SPARK							
SG7303	1-519-421-11	GAP, DISCHARGE							

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